

THE BOSTON Medical and Surgical JOURNAL

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The Massachusetts Medical Society

PROCEEDINGS OF THE COUNCIL

STATED MEETING, FEBRUARY 3, 1926

A STATED MEETING of the Council was held in John Ware Hall, Boston Medical Library, February 3, 1926, at 12 o'clock, noon. The President, Dr. James S. Stone, was in the chair and the following 108 Councilors present, and also, by invitation, Dr. F. P. Denny, Dr. C. L. Seudder and Dr. E. A. Darling:

BARNSTABLE
W. D. Kinney

BERKSHIRE
Henry Colt
A. P. Merrill
J. B. Thomas

BRISTOL NORTH
A. S. MacKnight
F. A. Hubbard

BRISTOL SOUTH
E. F. Curry

ESSEX NORTH
R. C. Hurd
E. S. Baggett
J. Forrest Burnham
T. R. Healy
G. E. Kurth
F. S. Smith
F. W. Snow
W. D. Walker

ESSEX SOUTH
J. F. Donaldson
J. A. Bedford
H. K. Foster
J. F. Jordan
J. W. Trask
F. W. Baldwin
W. T. Hopkins
W. G. Phippen

FRANKLIN
G. P. Twitchell

HAMPDEN
W. C. Leary
E. A. Knowlton
J. P. Schneider

HAMPSHIRE
E. D. Williams

MIDDLESEX EAST
C. R. Henderson
Richard Dutton
A. E. Small

MIDDLESEX NORTH
J. F. Boyle
A. M. Gardner
W. B. Jackson
J. H. Lambert
J. A. Mehan
T. A. Stamas

MIDDLESEX SOUTH
G. L. West
E. A. Andrews
E. H. Bigelow
A. H. Blake
F. G. Curtis
F. A. Higginbotham
H. J. Keaney
Edward Mellus
C. E. Mongan
J. P. Nelligan
C. F. Painter
W. A. Putnam
L. H. Raymond
J. W. Sever
H. W. Thayer

NORFOLK
D. N. Blakely
H. K. Boutwell
G. G. Bulfinch
W. L. Burrage
P. W. Carr
Samuel Crowell
D. G. Eldridge
Maurice Gerstein
Harry Goldman
A. H. Hodgdon
G. W. Kaan
Bradford Kent
J. S. H. Leard
S. F. McKeen
M. V. Pierce
Victor Safford
Eugene Thayer
H. F. R. Watts

NORFOLK SOUTH
C. S. Adams
O. H. Howe

PLYMOUTH
J. H. Drohan
T. H. McCarthy
J. P. Shaw
SUFFOLK
C. M. Smith
J. W. Bartol
M. E. Champion
A. L. Chute
W. H. Ensworth
G. B. Fenwick
J. E. Goldthwait
R. B. Greenough
E. P. Joslin

SUFFOLK (cont.)
F. B. Lund
G. B. McGrath
R. H. Miller
T. J. O'Brien
R. B. Osgood
John Rock
Jane D. K. Sabine
J. J. Skirball
Robert Soutter
J. S. Stone

WORCESTER
R. P. Watkins

WORCESTER (cont.)
W. P. Bowers
L. R. Bragg
W. J. Delahanty
G. A. Dix
G. E. Emery
M. F. Fallon
David Harrower
E. L. Hunt
A. G. Hurd
A. W. Marsh
G. O. Ward
F. H. Washburn
S. B. Woodward

The record of the last meeting was read in abstract and as no errors or omissions were noted it was accepted as read and as printed in the official organ of the Society. The President referred to the deaths of two Councilors since the annual meeting, namely that of Dr. Leslie Hinckley Spooner, on June 28, Secretary of the Suffolk District, an earnest, keen worker in behalf of the medical profession, and of Frederic Benjamin Mooers Cady, on November 12, former secretary of the Middlesex South District, an expert in neurology, a conscientious, straightforward physician who had sacrificed his life through disease acquired overseas during the war. The President thanked the members of the Council and the Fellows at large for their cordial co-operation in legislative matters and urged them to attend the important hearings soon to be held at the State House. He stated that the Board of Registration in Medicine had asked that knowledge of misdoing by members of the profession in the state, such as the performing of abortions and charging excessive fees, be brought to their attention; that if Fellows did not wish to give their names they might send information to the president or secretary and it would go to the Board impersonally.

Dr. John Rock reported for the Committee of Arrangements. He said that plans were well perfected for the Annual Meeting in the Hotel Kimball, Springfield, June 8 and 9; that as the accommodations for the scientific and commercial exhibits in the hotel were not sufficient that these would be held in the quarters of the Young Men's Christian Association, next door; he hoped that the Fellows would bring their wives and that special arrangements had been made for the entertainment of ladies; there would be golf at the Country Club; constructive suggestions and criticisms would be welcome.

Dr. D. N. Blakely read the following report of the Committee on Membership and Finance, as to Membership:

**REPORT OF COMMITTEE ON MEMBERSHIP AND FINANCE,
ON MEMBERSHIP**

The Committee on Membership and Finance makes the following recommendations as to membership:

- At the last meeting of the Council, held October 7, 1925, there were nominated for honorary fellowship the following:

Duane, William, A.B., 1892, University of Pennsylvania; A.M., 1895, Harvard; Ph.D., Berlin, 1897; S. D. (Hon.) University of Pennsylvania, 1922; Professor of Physics, University of Colorado, 1898-1907; Research worker, Curie Radium Laboratory, University of Paris, 1907-1912; Assistant Professor of Physics, 1913-17; Professor of Bio-Physics, Research Fellow in Physics, Cancer Commission, Harvard, 1917 —; Fellow American Academy; Member National Academy of Sciences, American Philosophical Society.

Bovie, William T., A.B., University of Michigan, 1908; A.M., University of Missouri, 1910; Ph.D. —; Professor of Biology and Geology, Antioch (O.), 1905-07; Instructor in Bacteriology, 1917-20, Assistant Professor of Bio-Physics, Research Fellow in Bio-Physics, Cancer Commission, Harvard, 1920 —; Fellow American Academy.

Both these men are actively associated with the work of the Huntington Hospital and in other ways are in a position to give valuable aid to physicians. Your committee heartily recommends their election to Honorary Fellowship under the provisions of Chapter I, Section 4, of the By-Laws.

- That the following named Fellow be allowed to retire under the provisions of Chapter I, Section 5, of the By-Laws:

1. Clapp, Herbert Codman, Brookline.

- That the dues for 1926 of the following named Fellow be remitted under the provisions of Chapter I, Section 6, of the By-Laws:

1. Wilder, Edward Wheeler, Madura, So. India.

- That the following named nine Fellows be allowed to resign under the provisions of Chapter I, Section 7, of the By-Laws:

1. Duval, Leon Emile, Toledo, Ohio.

2. Gile, Harold H., New York City.

3. Lindsay, John Crandall, Cheshire, Conn.

4. Lindsay, Marie Strom, Cheshire, Conn.

5. Lowry, Lawson Gentry, Cleveland, Ohio.

6. Murphy, Albert Bernard, Everett, Wash.

7. Shea, John Joseph, San Diego, Cal.

8. Weber, Frederick Henry, Worthington, Ohio.

9. Weber, Mary Albright Jackson, Worthington, Ohio.

- That the following named twelve Fellows be allowed to change their membership from one District Society to another without change of legal residence, under the provisions of Chapter III, Section 3, of the By-Laws:

One from Bristol North to Norfolk

- Pastene, Albert Angelo, Norton.

One from Essex South to Middlesex South

- Paine, Mortimer Harwood, Ipswich.

Four from Middlesex South to Suffolk

- Davidoff, Reuben Benjamin, Newton Center.
- Fisher, David, Brighton.
- Klein, Armin, Brighton.
- Prenn, Joseph, Brighton.

Four from Norfolk to Suffolk

- Cobb, Stanley, Canton.
- Farnsworth, Kenneth Clyde, E. Milton.
- Gosman, George Henry Rankin, Brookline.
- Hurwitz, Abraham Joseph, Brookline.

One from Suffolk to Middlesex South

- Day, Hilbert Francis, Cambridge.

One from Suffolk to Norfolk

- Hill, Lewis Webb, Jamaica Plain.

DAVID N. BLAKELY, *Chairman.*

February 3, 1926.

The report was accepted and its recommendations adopted. On proceeding to vote on the nomination of William Duane for honorary membership a show of hands made the vote unanimous as was a similar vote on the nomination of William T. Bovie. They were declared elected. Dr. T. E. A. McCurdy, of Boston, was restored to fellowship under the usual conditions. The following committees were appointed severally to consider and report on the petitions for restoration of six former Fellows:

For H. A. Brown

W. E. Balmer
E. W. Barry
W. L. Johnson

For T. F. Ash

C. H. Colgate, Jr.
C. D. McCann
L. B. Packard

For J. T. Cahill

J. A. Hogan
J. J. Bartley
J. J. Hilton

For G. W. Dainty

W. D. Kinney
E. E. Hawes
C. J. Bell

For C. H. Crawford

H. W. Manahan
R. M. Birmingham
G. S. Allen

For C. M. Stearns

J. J. Skirball
A. S. Troupin
L. C. Stein

The President nominated and the Council appointed Dr. Charles F. Painter, chairman of the Committee on Medical Education and Medical Diplomas, a delegate to the Annual Congress on Medical Education, Medical Licensure, Public Health and Hospitals, at Chicago, February 15-18, 1926.

On nomination by the President the appended were appointed delegates to the annual meetings of the New England State Medical Societies:

MAINE: R. C. Hurd, E. T. Wyman.

NEW HAMPSHIRE: A. W. Marsh, C. H. Lawrence.

VERMONT: H. L. Smith, A. C. Eastman.

RHODE ISLAND: F. R. Jouett, Thomas Almy.

CONNECTICUT: J. W. Bartol, R. H. Miller.

Dr. J. F. Burnham, of the Committee on Medical Education and Medical Diplomas, said that a few minor changes had occurred in the standing of various medical colleges throughout the country, since the last official list was printed and asked that leave to print a new list embody-

ing these changes be granted, and on his motion it was so voted.

Dr. T. J. O'Brien, of the Committee on State and National Legislation, read the following report, which was accepted with applause:

REPORT OF THE COMMITTEE ON STATE AND NATIONAL LEGISLATION

The legislative problems of 1926 are comparable to those of 1924 and 1925 in that many of the bills defeated in former sessions have been re-introduced in the present session. We have the two bills on vaccination, one in favor of vaccination of all children under fourteen, and one opposed to compulsory vaccination. Your Committee is in favor of Dr. Woodward's bill, number 386—House, and opposed to House Bill 694, and asks your support. Hearing on both bills on February 24, 10:30 a. m., before Committee on Public Health.

The Chiropractors have introduced a bill numbered House 708, and ask for the creating of a Board of Examination and Registration to regulate the practice of Chiropractic. The bill numbers about 2500 words and is poorly drawn. An abstract of said Bill has been mailed to each member of the Society that the physicians may thoroughly understand the principles involved.

Directly after the October meeting of the Council, Dr. James S. Stone launched a State-wide campaign of education, assigning certain members to the duty of addressing various gatherings of laymen, that our principle of a single standard for fitness to practice the healing art in this Commonwealth, might be endorsed by the general public. The President desires to take advantage of this opportunity to express his appreciation for the sacrifices made by these men, and for the great good accomplished. The Chiropractic Bill is assigned for a hearing before the Committee on State Administration on February 4, and you are earnestly urged to be present. The Chiropractors have great numbers present at these hearings, and employ attorneys to present their bill, expert publicity men to sway public opinion, and trained lobbyists to present their personal influence with the legislators. We are handicapped in comparison of organization, but we are favored by the presence of a personal representative in the physician placed so strategically in every hamlet and town. Someone has said that a physician is an economic necessity in the neighborhood in which he practices, and, assuming this to be true, we must insist that every member of the Society fully utilizes this advantage and sees that proper instruction be sent to each representative by his constituents.

House Bill 998 will be heard before the Committee on Education on Feb. 11th at 10:30 a. m. This is an act to give the Department of Education the right to investigate the work and equipment of medical schools and to report thereon. Your Committee has voted to support this bill, and asks for your assistance. A copy of this bill and a letter signed by Dr. Stone will reach you before the date of the hearing. There has been great delay in the printing of bills this session, and the Committee regrets its inability to supply copies of the Vaccination, Chiropractic and House Bill 998 at present.

A hearing was held on House Bill 343 on January 20, 1926, and a few days later its proponents were given leave to withdraw. This was a petition that the practice of medicine be made to include the administering to human beings of ether, chloroform, nitrous oxide gas or other substances producing unconsciousness.

Various bills on the admissibility of supplying radium for general use by physicians in order to alleviate distress caused by cancer, have been intro-

duced, but your Committee has deemed it wise to avoid action at present owing to the absence of definite methods for the practical administering of this powerful therapeutic agent and because it favors State medicine. Hearings before the Committee on Public Health are assigned for February 23, 10:30 a. m. on House Bills 427, 605, 724, 789, and 1033. House Bill 426 was heard on Feb. 2nd. This was an act restricting the sale of veronal and derivatives thereof. Your Committee voted not to appear at this hearing. Leaves to withdraw was granted the petitioners. Senate Bill 245 which was heard at 10:30 a. m., Feb. 3rd is somewhat similar to House 426, but broader in its scope, as caffeine, quinine and salicylates are included and can only be sold by registered pharmacists. No action taken by your Committee.

House Bill 696 will be heard on Feb. 9th and is an act to place the licensing of manicurists and masseurs, and the establishments for the giving of vapor baths under the jurisdiction of the State Board of Medicine. Your Committee felt that this was a problem for the State police and health authorities and not a matter involving medical principles.

Your President and your Committee request active, earnest and tireless support of the great principles involved, in supporting one standard for the fitness to practice medicine in this Commonwealth, and, to raise the standard of medical education in our medical schools.

Respectfully submitted,

THOMAS J. O'BRIEN, Secretary.

In the absence of the Treasurer Dr. D. N. Blakely read the Treasurer's Report (See Appendix). Moved to accept the report, seconded and carried. Dr. F. P. Denny read the report of the Auditing Committee (See Appendix) and it was duly accepted by vote. Dr. Blakely read the report of the Committee on Membership and Finance, as to Finance, including the Budget (See Appendix) and it was accepted. The Secretary read the following letter:

Cambridge, February 3, 1926.

Dr. Walter L. Burrage,
Secretary, The Massachusetts Medical Society.

Dear Dr. Burrage:

The undersigned have the honor of nominating for honorary membership in the Massachusetts Medical Society George Howard Parker, S.B., S.D., (Harvard) of Cambridge, Professor of Zoology and Director of the Zoological Laboratory in Harvard University.

(Signed)

Fred R. Jouett,
James Warren Sever.

The nomination was referred to the Committee on Membership and Finance by vote, under the terms of Chapter I, Section 4, of the By-Laws.

Dr. C. L. Seudder, chairman of a committee appointed at the last meeting "to consider the causes and methods of prevention, defence and insurance in cases of alleged malpractice," reported progress. He said the problem was enormous; that the committee had made a beginning in becoming informed adequately as

to the present method by which the Society deals with the malpractice cases, the secretary of the Society having given the committee freely all the data in his possession. The committee had been much impressed by the simplicity of the present arrangements which the Society maintains. Inquiry has been made from Dr. W. C. Woodward, of Chicago, Executive Secretary of the Bureau of Legal Medicine and Legislation of the American Medical Association as to any suggestions he may have to offer and also from Mr. Stevens, of Salt Lake City, consulting lawyer of the American College of Surgeons. The committee is getting information as to how the different states are handling their problems and will report in full at a later date. This was accepted as a report of progress.

The President said that the Society had been approached by a Mrs. Abel, of Louisville, Ky., and by a Mrs. Bunee, of Atlanta, Ga., as to the formation of a Woman's Auxiliary in this state. Dr. E. F. Curry, of Fall River, *Moved*:

That a committee be appointed by the chair to consider the advisability of establishing a Woman's Auxiliary to the Massachusetts Medical Society and to report at a future meeting of the Council. The motion being duly seconded was carried, on a show of hands, and the chair appointed as this committee:

E. F. Curry, Fall River W. C. Leahy, Springfield
John Rock, Boston A. W. Marsh, Worcester

The President showed a large amount of correspondence regarding "The Physicians' Home, Inc." a project of which Dr. Robert T. Morris, of New York, is president; he said that there is at present a nation wide campaign to raise funds for a home where physicians who are out of health or in financial distress may be cared for. He asked Dr. W. P. Bowers to explain the situation to the Council. Dr. Bowers spoke at length stating that there was a home in New York State for the invalid physicians of that state. The success of that experiment had led to the founding of "The Physicians' Home, Inc." and it was hoped that people of large means would help in supporting it and in making a national endowment fund, from their regard for the medical profession. He spoke of the Massachusetts Medical Benevolent Society, with a long history of usefulness in the past and read a letter from Dr. W. L. Richardson, treasurer of that society, concerning the work it accomplishes in the relief of the aged or incapacitated physicians and their families. That society provides annuities for such deserving physicians and their families but provides no domicile. Dr. Richardson thought that the Massachusetts Medical Benevolent Society should be kept intact. Dr. Bowers moved, and it was *Voted*,

That a committee of five be appointed by the chair to consider "The Physicians' Home, Inc.,"

its relations to the Massachusetts Medical Society and to its Fellows, its relations to any other societies with similar purposes and to report its findings and recommendations to the Council or to the Fellows of the Society through the columns of the BOSTON MEDICAL AND SURGICAL JOURNAL. The chair appointed as this committee:

W. P. Bowers, Clinton G. L. Richards, Fall River
G. W. Gay, Chestnut Hill M. V. Pierce, Milton
Henry Colt, Pittsfield

At the suggestion of the President the privileges of the floor were voted to Dr. E. A. Darling of Cambridge, who introduced the following resolution:

Resolved: That the Council of the Massachusetts Medical Society disapproves of any procedure by a physician not intended to benefit the individual intrusted to his care, except when an individual voluntarily submits to experiment upon himself for the benefit of humanity. That the Council directs that this resolution be printed in the BOSTON MEDICAL AND SURGICAL JOURNAL and requests that the Secretary transmit it to the Secretary of the American Medical Association for reference to the House of Delegates.

Dr. Darling thought that certain procedures, recently given publicity in medical journals, such as a large number of lumbar punctures made in new born babies to ascertain whether there had been intra-cranial hemorrhages, and the treatment of certain insane patients, were reprehensible. The matter was discussed by J. H. Lambert, C. L. Scudder, W. T. Hopkins, E. H. Bigelow, A. P. Merrill, E. P. Joslin, Victor Safford, E. L. Hunt, Richard Dutton and W. P. Bowers. On motion by Dr. Lambert, duly seconded, it was *Voted*,

That the chair appoint a committee to consider the advisability of acting on Dr. Darling's resolution. The chair appointed the following committee:

E. A. Darling, Cambridge J. H. Lambert, Lowell
W. P. Bowers, Clinton E. L. Hunt, Worcester
E. P. Joslin, Boston

Dr. Samuel Crowell said that it had come to his notice that the practice of fee splitting had become general and was noticeable throughout the profession and he *Moved*, That it is the sense of this Society that fee splitting commercializes the practice of medicine and is detrimental to the welfare of our patients.

Dr. F. B. Lund thought that such a matter should be referred to a committee. He made a motion to that effect which was accepted as a substitute by Dr. Crowell. It was moved, seconded and carried, That a committee be appointed by the chair to consider the practice of fee splitting in Massachusetts and to report to the next meeting, or in the columns of the BOSTON MEDICAL AND SURGICAL JOURNAL, what

action, if any, should be taken by the Society.
The President appointed:

Samuel Crowell, Dorchester F. B. Lund, Boston
S. F. McKeen, Brookline

Dr. H. G. Stetson presented the report of the Massachusetts delegates to the meeting of the House of Delegates of the American Medical Association at Atlantic City, last May. *Voted*, That the report be accepted and published in the BOSTON MEDICAL AND SURGICAL JOURNAL. Adjourned at 1:25 P.M.

WALTER L. BURRAGE, Secretary.

APPENDIX TO THE PROCEEDINGS OF THE COUNCIL

REPORT OF THE AUDITING COMMITTEE

Your committee have examined the securities of the Massachusetts Medical Society and find them to be as scheduled in the accountant's report.

FRANCIS P. DENNY,
FRED R. JOUETT,
Auditing Committee.

February 3, 1926.

LETTER OF CERTIFIED PUBLIC ACCOUNTANTS

January 28, 1926.

Dr. F. P. Denny, Dr. F. R. Jouett,
Auditing Committee, Massachusetts Medical Society,
Boston, Mass.

Gentlemen:

At the request of your Treasurer, Dr. Arthur K. Stone, we have audited the books and accounts of the Massachusetts Medical Society for the year ended December 31, 1925, and attach:

Schedule A—Statement showing the Assets and Liabilities of the Massachusetts Medical Society December 31, 1925.

Schedule B—Statement showing the Current Account of the Massachusetts Medical Society for the year ended December 31, 1925.

The cash on deposit in the banks has been reconciled with the bank statements and found to be correct. All known cash receipts have been properly accounted for and disbursements are supported by cancelled checks.

The attached statement of Assets and Liabilities represents the true condition of the Society to the best of our knowledge and belief.

Respectfully submitted,

HARTSHORN AND WALTER,
Certified Public Accountants.

TREASURER'S REPORT

SHOWING THE ASSETS AND LIABILITIES OF THE MASSACHUSETTS MEDICAL SOCIETY DECEMBER 31, 1925

SCHEDULE A

ASSETS

Cash:

New England Trust Company.....	\$10,063.43
Old Colony Trust Company.....	7,267.42
	<hr/>
	\$17,330.85

Investments:

Shattuck Fund: Annuity Policy, Massachusetts Hospital Life Insurance Company.....	\$9,166.87
Phillips Fund: Massachusetts 3½'s Gold Bonds.....	10,000.00
Cotting Fund: Deposit in Institution for Savings in Roxbury and Its Vicinity.....	\$1,000.00
Deposit in Provident Institution for Savings in the Town of Boston.....	1,000.00
Deposit in Suffolk Savings Bank for Seamen and Others in Boston.....	1,000.00
	<hr/>
	3,000.00

Permanent Funds:

Deposit in Franklin Savings Bank in the City of Boston.....	1,074.48
Par value	
\$5,200.00 Liberty Bonds 4th Issue 4½%.....	5,043.23
5,000.00 Massachusetts 3½% Bonds 1938.....	5,000.00
1,000.00 United States Steel Corporation 5's 1963.....	1,009.00
2,000.00 United States Rubber Bonds 5's 1947.....	1,735.50
2,000.00 American Sugar Refining Company 5's 1937.....	1,972.50
2,000.00 Great Northern Railway Company 5½'s 1952.....	1,932.50
2,000.00 Adirondack Power and Light Company 6's 1950.....	1,970.00
4,000.00 Public Service Company, Northern Illinois, 5's 1956.....	3,640.00
5,000.00 Dayton Power and Light Company 5's 1941.....	2,797.50
3,000.00 Toledo Edison Company 5's 1947.....	2,805.00
3,000.00 Cedar Rapids Manufacturing and Power Company 5's 1953.....	2,805.00
1,000.00 American Telephone and Telegraph Company 5½'s 1943.....	985.00
1,000.00 Mallory Steamship Company 5's 1932.....	900.00
3,000.00 Commonwealth of Australia 5's 1955.....	2,985.00
3,000.00 United States Cold Storage Bonds 6's 1945.....	3,000.00
3,000.00 Georgia Railway and Power Company 6's 1954.....	3,120.00
	<hr/>
	64,941.58
Total.....	1.00
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	\$82,273.43

The Boston Medical and Surgical Journal.

Total.....

LIABILITIES

Endowment Funds:

Shattuck Fund (G. C. Shattuck 1854. Balance 1866)	\$9,166.87
Phillips Fund (Jonathan Phillips 1860)	10,000.00
Cotting Fund (B. E. Cotting \$1,000.00—1876, 1881, 1887)	3,000.00

\$22,166.87

General Fund Account:

Balance, January 1, 1925	\$54,934.82
Net Gain for the year ended December 31, 1925—Schedule B	5,171.74
Total	60,106.56

\$82,273.43

STATEMENT
SHOWING THE CURRENT ACCOUNT OF THE MASSACHUSETTS MEDICAL SOCIETY
FOR THE YEAR ENDED DECEMBER 31, 1925

SCHEDULE B

CREDIT

Assessments Received by District Treasurers:

Barnstable	\$265.00
Berkshire	736.00
Bristol North	528.00
Bristol South	1,409.17
Essex North	1,569.00
Essex South	1,332.00
Franklin	288.00
Hampden	1,964.00
Hampshire	470.00
Middlesex East	720.00
Middlesex North	1,089.00
Middlesex South	4,521.00
Norfolk	4,105.00
Norfolk South	570.00
Plymouth	769.00
Suffolk	5,730.00
Worcester	2,672.00
Worcester North	598.00
Total	\$29,335.17
Assessments Received by Treasurer	\$2,934.09
Less—Dues Returned	74.00
Total	2,860.09

\$32,195.26

Total

Income from Shattuck Fund

\$481.26

Income from Phillips Fund:

350.00

Massachusetts 3½% Bonds

Income from Cotting Fund:

350.00

Interest—Institution for Savings in Roxbury and Its Vicinity	\$42.50
Interest—Suffolk Savings Bank for Seamen and Others, Boston	45.00
Interest—Provident Institution for Savings in the Town of Boston	45.00

132.50

Income from Permanent Funds:

Interest—Franklin Savings Bank	\$48.34
Liberty Bonds 4½%	221.00
Massachusetts Bonds 3½%	175.00
United States Rubber Company Bonds	100.00
United States Steel Company Bonds	50.00
American Sugar Company Bonds	120.00
Great Northern Railway Company Bonds	110.00
Adirondack Light and Power Bonds	120.00
Cedar Rapids Manufacturing and Power Company Bonds	150.00
Dayton Power and Light Company Bonds	225.00
Toledo Edison Company Bonds	160.00
Public Service Northern Illinois Bonds	200.00
Georgia Railway and Power Company 6's	90.00
American Telephone and Telegraph Company Bonds	55.00
Winchester Arms Company Note Dec. 31, 1924	221.25

\$2,035.59

Less.—*Interest Advanced on Permanent Fund Purchases:*

Malvay Steamship Company Bonds.	\$8.47		
Commonwealth of Australia Bonds.	11.67		
United States Cold Storage Company Bonds.	21.00		
Georgia Railway and Power Company Bonds.	66.00		
		107.14	
			1,928.45
<i>Income from Deposit in Banks:</i>			
New England Trust Company.	\$311.63		
Old Colony Trust Company.	362.69		
		674.32	
			3,566.53
Total.			\$35,761.79

DEBIT

General Expenses:

President's expense.	\$141.83		
Secretary's expense.	772.61		
Treasurer's expense.	513.56		
District Treasurers' expense.	1,568.43		
Censors' expense.	530.66		
Delegates' expense.	336.16		
Committee Room expenses:			
Equipment	\$357.00		
Rent	280.00		
Salaries	250.00		
Other expenses	220.55		
		1,107.55	
Salaries		3,150.00	
Rent		1,200.00	
Miscellaneous expenses		5.03	
			\$9,325.83

Boston Medical and Surgical Journal

Shattuck Lecture.	200.00
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Committee Expenses:

Arrangements	\$2,030.62		
Publications	304.01		
Membership and Finance	10.56		
Ethics and Discipline	2.00		
Medical Education	110.00		
State and National Legislation	317.98		
Public Health	800.00		
		3,575.17	

Annual Dividends to District Societies

Defense of Malpractice Suits.	1,252.05
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Cotting Lunches

Total Expenses.	\$30,590.05
Balance Transferred to General Fund Account.	\$5,171.74

RECONCILIATION BETWEEN THE PROFIT AND LOSS AND BUDGET
FOR THE YEAR ENDED DECEMBER 31, 1925

	Profit and Loss Account	Budget Estimate	Under- Estimated	Over- Estimated
REVENUE:				
Assessments	\$32,195.26			
Investments	3,566.53			
Total Society Revenue.	\$35,761.79	\$35,000.00		
Increase in Revenue over Budget		761.79		
Total as per Auditor's Report.	\$35,761.79	\$35,761.79		
Expenses:				
<i>Salaries of Officers:</i>				
Secretary	\$2,250.00	\$2,500.00		\$250.00
Treasurer	500.00	500.00		
Librarian	400.00	400.00		

Officers' Expenses:

President	141.83	250.00	168.17
Secretary	772.61	850.00	77.33
Treasurer	513.56	600.00	86.44
District Treasurers	1,568.43	1,500.00	\$68.43
Censors	530.66	500.00	30.66
Delegates	336.16	500.00	163.84
Rent	1,200.00	1,200.00	
<i>Journal</i>	12,000.00	15,000.00	4,000.00
Defense of Malpractice Suits	1,252.05	2,000.00	747.95
Shattuck Lecture	200.00	200.00	
Cotting Lunches	237.00	400.00	163.00
Committee Room Expenses	1,107.55	1,475.00	367.45
<i>Standing Committees:</i>			
Committee of Arrangements	2,030.62	2,000.00	30.62
Publications and Scientific Papers	304.01	200.00	104.01
Membership and Finance	10.56	25.00	14.44
Ethics and Discipline	2.00	25.00	23.00
Medical Education	110.00	175.00	65.00
State and National Legislation	317.98	500.00	182.02
Public Health	800.00	600.00	200.00
Public Instruction		300.00	300.00
<i>Dividends to District Societies</i>	4,000.00	4,000.00	
<i>Miscellaneous Expenses</i>	5.03		5.03
Total Expenses as per Auditor's Report	\$30,590.05		\$438.75
Total Budget		\$36,700.00	\$6,548.70
Expenses Over-Estimated		6,109.95	6,109.95
Revenue Under-Estimated	\$30,590.05	\$30,590.05	\$6,548.70
Expenses Over-Estimated	6,109.95		
Excess of Net Income Over Budget Estimate	\$6,871.74		
Deduct, — *Budget Charge to General Fund Account	1,700.00		
Balance Transferred to General Fund Account	\$5,171.74		

*Amount by which Budget Estimated Expenses exceeded Budget Estimated Income.

REPORT OF COMMITTEE ON MEMBERSHIP AND FINANCE AS TO FINANCE BUDGET FOR 1926

APPROPRIATIONS

<i>Salaries:</i>			
Secretary		\$2,500	
Treasurer		500	
Librarian Emeritus		400	
			\$3,400
<i>Expenses of Officers and Delegates:</i>			
President and Vice-President		\$250	
Secretary		750	
Treasurer		600	
District Treasurers		1,500	
Censors		500	
Delegates to House of Delegates, A. M. A.		1,000	
			4,600
Rent		1,200	
<i>Boston Medical and Surgical Journal</i>		15,000	
Malpractice Defence		2,000	
Shattuck Lecture		200	
Cotting Lunches		500	
Committee Room Rent and Expenses		1,500	
			\$28,400
<i>Standing Committees:</i>			
Of Arrangements for Annual Meeting		\$2,500	
Publications and Scientific Papers		200	
Membership and Finance		25	
Ethics and Discipline		25	
Medical Education and Medical Diplomas (including expenses of Delegate to annual congress at Chicago)		200	
State and National Legislation (including expenses of Delegate to annual congress at Chicago)		500	

Public Health	600
Public Instruction	300
Dividends to District Societies	4,350
Total	4,000
Income as Estimated by Treasurer.	\$36,750
To be taken from General Fund	\$36,000
	\$750

DAVID N. BLAKELY, *Chairman.*

February 3, 1926.

ORIGINAL ARTICLES

THREE MONTHS ON A MEDICAL SERVICE*

BY DWIGHT O'HARA, M.D.

ALTHOUGH new facts in medicine rarely come from other than our larger clinics and their associated laboratories, still the smaller mills are grinding, and the grist which comes to them is, from a clinical point of view, as good as any. I have often thought that general practice presents the most interesting clinical material of its locality. Whatever its limitations may be, at least it is cut from the whole cloth. When a group of practitioners, most of them rotating on a hospital service, and familiar not only with each other but with the general environment and social conditions of their patients, are the ones to refer their cases to a small clinic, it retains a certain freshness which is often lost in the crowds of the larger hospitals. If opportunities for research are lacking, there is no lack in variety of material, and if diagnostic speculations can not be carried to the point of exact classification, they still afford ample clinical exercise. Thucydides said: "To know a thing and not express it is all one as if he knew it not". In this spirit I am going to review some of the more interesting facts which we observed on the medical service of the Waltham Hospital during a recent period of three months. (September, October and November, 1925.)

During the three months there were thirty-eight admissions to the service, with twenty-eight different diagnoses. There were other secondary diagnoses such as senility, arteriosclerosis, etc., which were not recorded as such. In one case no diagnosis was made. There were seven deaths and four necropsies—a percentage of 57. Of the three remaining deaths one necropsy was lost for medico-legal reasons, and another because relatives were known to exist but could not be located. In only one instance was permission actually withheld. The opportunity for post-mortem examinations in the hospitals of our smaller communities therefore approaches that in private practice, in which permission can be obtained in from 80 to 90 percent of the

fatal cases. Purulent pericarditis, cirrhosis of the liver, gall stones and a renal calculus were conditions the existence of which was revealed only by necropsy. One wonders how many other such conditions left the hospital unrecognized in vivo.

SOME ABDOMINAL TUMORS

The clinical consideration of any case is unavoidably tintured by recent experiences, and for this reason I am going to tell briefly the findings in a private case the week before I came on service. It was a woman who had been thoroughly studied in one of the best equipped hospitals in Boston. She had a mass in the right upper quadrant of the abdomen, which we all believed to be the gall bladder. Four weeks after coming home she died, and necropsy revealed a general carcinomatosis. The supposed gall bladder was the primary neoplastic mass in the hepatic flexure.

With this case in mind I examined the first patient to be admitted on the service. He was a man of about sixty, intensely jaundiced, with an easily palpable mass in the right upper quadrant. His friends gave the history of a gradual, progressive and painless development, first of jaundice, then of weakness. The diagnosis of carcinoma of the head of the pancreas was easy, and was corroborated by the abdominal mass which was believed to be the tumor itself. The patient was in a stuporous condition on admission and died thirty-six hours later. Necropsy showed the mass to be the gall bladder, as large and almost as hard as the clenched fist of a heavyweight. Carcinoma of the ampulla was found, to be sure, but it was no larger than a robin's egg. Had the clinical suppositions in these two cases been reversed they would have been brilliant.

A third case entered the hospital complaining of a swelling and pain in the left upper abdomen. It was in an obese woman with evident arthritis of the fingers. On inspection the left side of the abdomen was definitely more prominent than the right, but palpation revealed no

*Read before the staff of the Waltham Hospital, January 19, 1926.

mass and we called it a "phantom tumor." The pain was due to a marked spinal hypertrophic arthritis, confirmed by X-ray.

SOME HEART FAILURES

Two of our fatal cases died with general anasarca. The most interesting feature in these cases was the prompt diuretic action of Novasurol, a drug brought to my attention last year by Dr. P. A. Leddy. I had used it on two cases previously, with the same striking therapeutic effect. The two accompanying lantern-slides of fluid intake and output show the effects of the drug on these two moribund patients. This method of reducing dropsy, while in no sense curative, is a very satisfactory one from the patient's point of view.

The Waltham Hospital, like the London office of the late Sir James Mackenzie, is situated on the top of a hill. A friend, coming up the hill to visit one of our patients, collapsed with acute cardiac decompensation as she entered the ward. She was appropriately treated by the interns, and considerably put in the bed beside her friend. The visit lasted for five days, and gave us the opportunity to observe the signs of mitral stenosis. She was advised to take a taxi cab on her next visit.

SOME NEUROLOGICAL PROBLEMS

In September, 1925, we saw two children die in their homes with acute bulbar paralyses. These cases were diagnosed as acute poliomyelitis. We were therefore expecting to see more of the disease when a thirteen-year-old girl entered the hospital, unable to talk or to swallow. There was no history of previous sore throat or malaise. The same patient had been seen a year before with paralysis of the left leg, which had been diagnosed as poliomyelitis at that time, and which had gradually improved leaving a slight atrophy of the leg. We were forced to the conclusion that if her present illness were poliomyelitis, her paralysis of a year ago must have been hysterical, and from that we reasoned that her present illness must also be hysterical in origin. Her temperature, pulse and white count were normal. Had the symptoms been of a less threatening nature we might have been content with a temporary diagnosis of hysteria, but we felt that we must lose no time in gathering further data. Consequently a lumbar puncture was done twenty-four hours after admission. This precipitated the patient's discharge against advice on the grounds of cruel and abusive treatment. Two months later we heard that she was still unable to swallow anything. She must have been thirsty by that time.

We had one case of real poliomyelitis in a young man of twenty-two. The day before admission he developed a paraplegia following a "cold" of a few days' duration. His temperature came to normal on the second day and

there was no further spreading of the paralysis until the fifth day, when, with a rise in the temperature, it extended upward involving both arms, the right one almost completely. Fortunately the diaphragm was not affected, and from then on improvement was slow but continuous. The lantern-slide shows the temperature curve and the extent of the paralysis, through the first three weeks of the disease. There seems to have been a distinct recurrence of the activity of the virus after a quiescent period of three days. A curious sign observed in this man was that although his right shoulder muscles, and presumably scaleni, were almost completely paralysed, yet he consistently showed a greater respiratory expansion of the right chest than of the left. We noted the same phenomena later, in a hemiplegia.

A six-year-old boy was admitted with the story that he had been drowsy and sleepy for four days. Any head injury was disclaimed by his parents. His temperature was normal and his white count 9,400. He was unconscious and showed continuous twitching of the left side of the face and the left arm. With a presumptive diagnosis of encephalitis, a lumbar puncture was done. An uniformly bloody fluid was obtained under a pressure of twenty millimeters of mercury. An X-ray disclosed a fracture of the base of the skull in the lateral view, but it could not be localized in the antero-posterior view. On questioning his playmates it was then discovered that he had fallen from the running-board of a stationary automobile six days before admission. Repeated lumbar punctures failed to relieve the symptoms, and he was transferred to the surgical service and a right parietal decompression was done by Dr. H. Q. Gallupe. The dura was bulging with pressure, but no blood clot was found. It was concluded that the fracture of the base was on the left and was responsible for the localizing symptoms by involving the exit of the seventh cranial nerve. Ten days later the child died. Although the operation gave disappointing results, it was well worth while for it enabled the child again to recognize his parents for a period of three days. Necropsy permission was refused.

Dr. A. Myerson very kindly came out from Boston one afternoon to help us out on a case of status epilepticus of forty-eight hours duration. The patient had been anonymously deposited on the hospital steps by an automobile party at 2 A. M.

SOME PERNICIOUS ANEMIAS

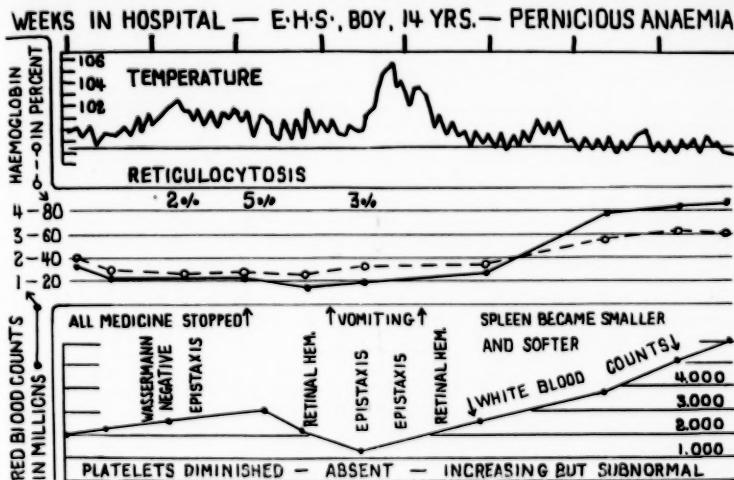
A boy fourteen years old had a negative family history. As an infant he had "food-poisoning". At the age of eight he had mumps and influenza (in 1918) and the following year he had pneumonia. About one and one-half months before admission he began to complain

of weakness in the legs and precordial pain. These symptoms recurred in attacks about once a week and lasted for two or three days. Three weeks before admission the neighbors noticed that he was getting pale. Up to this time he had been leading the normal summer outdoor life of boys of his age. Finally the parents sought the advice of Dr. Richard Collins, who advised immediate hospital care. There had been no bleeding prior to admission.

Physical examination revealed nothing but a faint systolic murmur, a palpable spleen, and pallor. The urine and stool examinations were repeatedly negative. The accompanying chart is an attempt to present the main clinical and

the end of two weeks it was agreed to omit all medical treatment except the forcing of a nourishing diet and cod liver oil. A few days later one of our colleagues, in a burst of scientific enthusiasm, omitted the cod liver oil, so the patient received practically no treatment whatsoever. The results justified this course.

Diagnostic suggestions were no less varied, (unfortunately there are no "diagnosticians" on our staff) but the general opinion was in favor of the diagnosis of Aplastic Anæmia until the end of the sixth week, when it was almost unanimously changed to that of Pernicious Anæmia with remission. At the end of the fourth week the patient's condition was critical,



blood findings throughout the patient's eight weeks' stay in the hospital. If it is involved it is perhaps more lucid than would be a rhetorical account of the same data, and it certainly occupies less space. The haemoglobin determinations and the red cell counts are so charted that where the haemoglobin line is above that of the cell count the color index is above 1.0, and where it is below the index is less than 1.0. In the smear, except for moderate changes in size and shape, the red cells were quite normal in appearance. There were a few stippled cells at most of the examinations. The spleen was palpable one inch below the costal border on entrance. Four weeks later it came down to two inches and was quite hard and resistant, and as improvement took place it became smaller and softer again. At the height of his illness he was slightly jaundiced for about two weeks.

Therapeutic suggestions were so abundant from those interested in the case, varying all the way from salvarsan to Blaud's pill, that at

and for several days death seemed imminent. Transfusion was refrained from on the ground that it was cruel to prolong the life of a case of aplastic anæmia, while if it were pernicious anæmia an eventual remission need not have been stimulated. How long we should have had the courage to persist in this laissez-faire attitude, had the profound anæmia continued, it is hard to say. At the end of the eighth week the patient left the hospital, apparently well. We know of no other condition than pernicious anæmia in which a red count of less than a million with a high color index will return to normal within a few weeks. If this case was an example of pernicious anæmia in a fourteen-year-old boy, it is extremely rare, and deserves recording for this reason alone. Its subsequent history will be interesting.

As an example of the dissimilarity which is possible in two cases of the same disease—or two diseases of the same name—another case was admitted on the very day that this one was

discharged. This other pernicious anaemia case was in a woman of forty-five. She had a definite history of several relapses and remissions. She had symptoms referable to the gastro-intestinal and nervous systems. She was well developed and nourished with a deeply pigmented skin and her sclerae were of muddy white color. She showed disturbances of epidermic sensation in her inability to distinguish between hot and cold on the left leg. Her urine and stools were negative. Her red count was 3,176,000; white count, 5,100; haemoglobin, 75%; color index, 1.1, and the smear showed some changes in size and shape, cells well filled with haemoglobin, several macrocytes, one normoblast, platelets diminished. This patient was advised to take an opportunity which she had to go to Florida for the winter.

THE DRUGSTORE TREATMENT FOR PNEUMONIA

A drug clerk, whose wife claimed that he was also a student in a Southern medical school, entered the hospital with a bilateral pneumonia and considerable abdominal distension. He was in a stupor which was far more profound than anything we had ever associated with pneumococcal infections. His wife gave the history that he had had a "cold" for several days. Not improving, he had been treating himself, until she found him unconscious with a bottle half full of veronal tablets. She thought he had taken the other half a short time before.

Two days after he came to us he died without regaining clear consciousness at any time. We were unable to recover any tablets, either from his stomach or his stools. During the last twenty-four hours he was rigid and cyanotic, with a large amount of pulmonary edema. The Medical Examiner ascribed his death to pneumonia and ingestion of veronal. The druggist for whom he worked later learned that he had been in the habit of using veronal when in the army.

Whether or not veronal was a factor in this fatality is not of great interest, but the situation was an interesting commentary on the intelligence with which patients are treated over the counters of drugstores. We have reason to believe that this practice is more widespread than is generally supposed by the medical profession.

An attempt has been made to present some of the more interesting problems which came up in three months of medical service at the Waltham Hospital. In the material presented is an extremely rare case—that of Pernicious Anemia in a fourteen-year-old boy.

Frequent use of the pronoun *we* has been made because personal opinions seldom represent more than a part of the conceptions held. For profitable discussions of the material at the bedside I am especially grateful to our colleague Dr. Felice Bongiorno, and hardly less so to our three enthusiastic and hard-working interns, Drs. S. Dubin, M. G. E. Evans and S. Ritchie.

SPONTANEOUS SUB-ARACHNOID HEMORRHAGE. REPORT OF FOUR CASES*

BY WYMAN RICHARDSON, M.D.

INTRODUCTION

SPONTANEOUS sub-arachnoid hemorrhage is probably not extremely rare, and this accident may well account for many cases classed as obscure meningitis, hemorrhagic meningitis, hemorrhagic encephalitis, and so forth.

C. P. Symonds¹ has recently made a complete resumé of the subject, and adds three cases of his own to those collected from the literature. The reader is referred to this article for details of the subject, and for the bibliography.

Sub-arachnoid hemorrhage means simply hemorrhage into the space in which the cerebrospinal fluid circulates and "spontaneous" is taken to mean "non-traumatic." It is obvious that such hemorrhage can occur under a variety of conditions. The chief groups as described by Symonds are as follows: (1) Arterio-sclerotic group, leading to rupture from aneurysm, or from hypertension; (2) Toxi-infectious group, including bacteria (notably anthrax), alcohol,

and syphilis; (3) Aneurysm (other than arterio-sclerotic), (a) from septic endocarditis emboli, or (b) where there is no vascular disease; (4) Miscellaneous; Blood diseases, sinus thrombosis, eclampsia, sunstroke, tumor, etc.

I am reporting four cases of sub-arachnoid hemorrhage without obvious cause, which occurred in younger people. There have been a good many reports of sub-arachnoid hemorrhage in the foreign literature, but I have been unable to find many cases reported in this country. C. A. McKendree² in 1921, reported a case associated with syphilis. Very recently N. Packard and E. G. Zabriskie³ have reported four fatal cases, all due to ruptured basilar aneurysms, as proved by post-mortem examination. In one of these cases there was serological evidence of syphilis; two of the remaining three were only twenty-odd years old, and showed no evidence of any disease. These two fall into the group described below, except that recovery did not take place.

Symonds believes that most if not all of the cases of hemorrhage in younger people are

*From the Medical Service of the Massachusetts General Hospital.

TABLE I
SPINAL FLUID FINDINGS*

Case No.	Date	Amount	Appearance	Initial Pressure	Final Pressure	Total Protein	W. B. C.	Sugar	Chloride	Remarks
(1)	10/27	15	Bloody. Yellow Supernatant.	170 ++	—	93	23 P=60 L=40	105,000	51	725
	10/30	15	Bloody	280	0	114	950 P=76 L=24	7,940	46	—
	11/7	10	Clear. Slight yellow.	180	60	29	20 L=100	25	—	—
	11/17	12	Clear, colorless	130	30	20	26 L=100	0	61	706
(2)	4/11	17	Turbid orange	110	0	103	230 P=49 L=46 LM=5	19,300	—	—
	†4/14	20	Turbid orange	++	0	Lost	150 P=33 L=66	1,310	—	10 c.c. anti-meningococcus serum.
	5/7	10	Colorless, clear	±120	?	29	19	0	—	2nd tube blood tinged (trauma).
	3/19	12	Reddish opalescent	300	10	212	1,650 P=85 L=15	20,000 crenated	—	(?) very rare gram. neg. diplococci.
(3)	†3/20 10 A. M.	25	Orange cloudy	300+	0	414	4,680	13,800	—	25 c.c. anti-meningococcus serum.
	†7 P. M.	25	Orange cloudy	300+	—	857	2,150	9,400	61	—
	†3/21	30	Very yellow	—	—	—	488	7,150	—	25 c.c. anti-meningococcus serum.
(4)	9/23	10	Blood tinged	—	—	—	880 P=80 L=20	36,000	—	—
	9/24	10	Turbid, yellowish	—	—	—	260	3,400	—	—
	9/25	25	Sl. turbid, sl. yellow	—	—	—	315 P=55 L=45	800	—	15 c.c. anti-meningococcus serum.
	10/4	6	Clear, colorless	—	—	—	105 P=5 L=95	—	—	—
	10/11	8	Clear, colorless	—	—	—	50 L=96 Endo- 4	0	—	—

*The spinal fluid Wassermann tests were repeatedly negative throughout. Examination of the sediment and culture for organisms was likewise negative, except for slight contamination with *staphylococcus albus* in one specimen in Cases 3 and 4. Hydrodynamics were normal throughout. The gold solution test was essentially negative, except for a reading of 4551330000 in the fluid from the first cistern puncture in Case 3.

†Cistern puncture.

due to ruptured congenital aneurysms; and he reports an autopsied case of his own where aneurysm was found. Fearnside¹, Turnbull, Epinger and Weichern, have described these aneurysms in detail, and believe them to be due to congenital defects in the artery wall. The aneurysms are usually small and occur generally at points of bifurcation at the base of the brain. Sometimes other definitely congenital circulatory anomalies are found. These aneurysms then, are the cause of some cases of sub-arachnoid hemorrhage, and may account for all those cases not associated with obvious disease or trauma.

The diagnosis of sub-arachnoid hemorrhage depends on the spinal fluid findings. Bloody fluid which does not become less bloody as several tubes are withdrawn, which does not clot, and which shows a yellow supernatant layer on immediate examination, is sufficient proof of subarachnoid hemorrhage.

REPORT OF CASES

CASE 1: (E. M. No. 272748), N. L., a single, white girl of nineteen, was admitted to the hospital October 27, 1925, complaining of headache. She had been well until four days before, when, after attending the moving pictures, she spent a restless night. The next morning she did not remember how she reached home. She complained at first of severe frontal, and later, of occipital headache, which came on quickly, but not instantaneously. There was no vomiting. Physical examination showed a well-developed and nourished girl, fairly rational, complaining of headache. Her neck was stiff. The pupils were equal and reacted to light and accommodation. The fundi were normal. Heart, lungs, and abdomen were negative. There was a bilateral Kernig sign, but no Babinski. The knee-jerks were equal and active. Her systolic blood pressure was 110, diastolic 75. The rectal temperature was 100°F, and the pulse 85.

Urine and stool specimens were negative. The red cell count was 4,800,000. The white cell count of 14,000 gradually subsided over the course of a week. The Blood Wassermann was negative. A blood smear was likewise negative. The blood coagulation time (done in serum tubes) was 15 to 32 minutes. 10 cc of antimeningo-coccus serum was given intramuscularly to produce a non-specific protein effect, and the next day the coagulation time was 6 to 6½ minutes. This procedure was repeated a week later, and the coagulation time dropped from 12 to 15 mins., to 7 to 9 mins. The spinal fluid findings are given in the table.

Three days after admission a bilateral sixth nerve palsy developed, together with slight blurring and flattening of the optic disc on the nasal side. During the next week there was gradually lessening headache, and dropping temperature, while at the same time the sixth nerve palsy slowly disappeared.

The patient was discharged about one month after admission, apparently well. The diagnosis was "Spontaneous sub-arachnoid hemorrhage; question of encephalitis lethargica (hemorrhagic type)."

CASE 2: (E. M. No. 262366): R. F., a married Italian, housewife, of fifty-two, was admitted to the hospital April 11, 1924. The patient had been well until one year before, at which time she began having rather mild headache, attributed to eye strain from sewing. She had not menstruated since her marriage, four months before admission. Three weeks before admission, she had a severe unproduc-

tive cough, with running nose, apparently a "cold." Ten days later, there was rather sudden, bitemporal headache, which caused her to cry out. One week before admission she was rational on going to sleep but never awakened to true consciousness. She vomited several times. During the week there was restlessness, sleeplessness and great pain (apparently headache) causing her to scream. For the last two days, she was drowsy. Five days before admission, her physician performed lumbar puncture. The fluid was said to have been cloudy, serum was given and the State Board of Health was said to have reported "No growth" and "negative Wassermann."

On the night of admission a bloody vaginal discharge was noted for the first time.

No history suggesting venereal infection could be obtained.

Physical examination showed a stuporous woman lying flat in bed, and obeying commands slowly. Her neck was stiff. The teeth were in poor condition. Pupils, fundi, heart, lungs, and abdomen were negative. There was a marked bilateral Kernig sign, but no ankle clonus or Babinski. The knee-jerks were equal and active. There was a bloody vaginal discharge. The systolic blood pressure was 110, the diastolic 45. The rectal temperature was 104°, the pulse 100.

The urine was negative. The red cell count was 4,900,000. The white cell count of 14,000 gradually subsided. The blood smear was negative. The Blood Wassermann was negative.

The spinal fluid findings are given in the table. The rectal temperature ranged from 102° to 104° for six days then gradually subsided. There was coincidental improvement in toxic and meningeal symptoms. For a few days before discharge there were peculiar mental symptoms of a delusional nature. Except for this questionable mental state she seemed well. She was discharged with the diagnosis of "Hemorrhagic Encephalitis."

CASE 3 (E. M. No. 261815): E. W., a single white girl of seventeen, was admitted to the hospital March 19, 1921, complaining of headache and vomiting.

Three weeks before she had been struck on the head with a cardboard pencil box. One week later, there was sudden onset of severe frontal headache, with vomiting. The headache persisted for 24 hours. For the next three days she was restless. Three days before admission she developed diplopia; and the next day stiff neck, headache, fever, photophobia, chills, and sweats.

Physical examination showed a fairly developed and nourished girl, drowsy but rational. There were a few small erythematous spots on her right buttock and abdomen. The neck was stiff. The pupils, heart and lungs, and abdomen were negative. There was a bilateral Kernig sign, but no clonus or Babinski. The knee-jerks were present and active. The optic discs were slightly hazy on the nasal side. The blood pressure was 120 systolic and 80 diastolic. The rectal temperature was 101°, the pulse 75. The urine showed a few casts in the first specimen. A blood smear was not remarkable. The red cell count was 4,600,000. The white cell count went from 17,000 to 28,000 and then gradually subsided. The Blood Wassermann was negative. X-Ray of the skull was negative. See Table 1 for spinal fluid findings.

The rectal temperature ranged from 100° to 101.5° and the pulse from 60 to 90 for four days. Then the temperature gradually subsided.

The following notes appear on the record: March 21: "Entire clinical picture most discouraging." March 23: "Much brighter." March 26: "Progressing splendidly."

A month after admission she was discharged, apparently entirely well, with a diagnosis of "Hemorrhagic Meningitis."

CASE 4 (E. M. No. 210684): G. M., a married Italian shoe-cutter, of thirty-two, was admitted to the hospital Sept. 23, 1916. Six days before admission there was sudden onset of frontal headache with vomiting. Two days later pain developed in the back, spine and legs. There was marked anorexia. The bowels were costive.

Physical examination showed a well-developed and nourished man. There were two small urticarial patches on the skin. The neck was stiff. The pupils reacted normally. There was a systolic murmur best heard in the pulmonic area. The lungs were clear. The liver edge was just palpable. There was a bilateral Kernig sign; but no clonus or Babinski. The knee-jerks were equal and active. The optic discs were blurred along the nasal side. The rectal temperature was 101° and the pulse 88.

The urine showed a rare granular cast, but no albumen. A blood smear was normal. The white cell count was 10,800, dropping to 7,000 three days later. A Blood Wassermann and the blood culture were both negative. The spinal fluid findings are shown in the table.

The rectal temperature ranged from 100° to 102.5° for two days, and then in the next three days subsided, as did the patient's symptoms. There were no meningeal signs after the third day. Convalescence was uneventful. The patient was discharged, apparently well, three weeks after admission, with a diagnosis of "Meningitis, caused by an unknown organism."

DISCUSSION

Three of these cases came under my own observation. The fourth I found in a search through the records of the last thirteen years filed under "Meningitis and encephalitis (Hemorrhagic or of unknown cause)".

These four cases were undoubtedly cases of sub-arachnoid hemorrhage; and in none was there any obvious cause for the hemorrhage. I can see no basis for making, in these cases, the diagnosis of hemorrhagic encephalitis. Neither the history, nor the physical or laboratory findings, nor the course suggest it. Without a somewhat typical picture, or without necropsy, or without typical sequelae the diagnosis of encephalitis cannot be made. Moreover, hemorrhagic encephalitis is certainly a very rare condition and I am even skeptical of its existence. The sixth nerve palsy in Case 1 does not mean much. In cases of proved ruptured aneurysm, cranial nerve involvement is common, while increased intra-cranial pressure alone often causes sixth nerve disturbance.

The symptomatology in these cases is interesting. Sudden severe headache was the usual mode of onset, the headache being followed at a varying interval by meningeal symptoms. If the hemorrhage is severe, as Symonds points out, sudden coma is the usual method of onset, to be followed by death, or by meningeal reaction, with recovery or death. Sudden headache or sudden coma, then, when followed by meningeal signs should lead one to suspect sub-arachnoid hemorrhage. The diagnosis can only be established by lumbar puncture. It should be borne in mind, however,

when speaking of sub-arachnoid hemorrhage, that this is a *symptom*, just as jaundice is a symptom. The true diagnosis should include the cause of the hemorrhage.

It is perhaps noteworthy that these patients, though almost always drowsy, are usually *rational*, which is rare in true meningitis of equal intensity.

Goulden and Riddoch⁵ report retinal hemorrhage as a common occurrence in sub-arachnoid hemorrhage; but it was not noted in any of these cases. There was usually slight blurring of the disc.

The impression on seeing these cases was that of infection. However, the hemorrhage itself can account for the fever and leucocytosis, which are the chief signs of infection.

The meningeal reaction to the hemorrhage may be very sharp, especially as shown by fairly marked leucocytosis in the spinal fluid. Early in the reaction, the cells are usually of the polymorphonuclear variety; but as hemolysis of the blood goes on, the percentage of mononuclear cells gradually increases. Usually three or four weeks later there is a slight increase in the number of cells in the spinal fluid, and they are all mononuclear. The explanation for this fact is not obvious. It may be that the polymorphonuclear cells are shorter lived. On the other hand, this same progression is noted when any acute inflammation subsides.

The other spinal fluid findings in these cases, were not remarkable. There was almost invariably evidence of increased intra-cranial pressure. Where the pressure readings were within normal limits, probably a definite amount of spinal fluid had escaped before the reading could be taken. The hydrodynamics, as determined by the usual methods, were normal. The gold solution test occasionally showed in this series some change from the normal, but not consistently in any one direction. The total protein, however, was invariably increased. This increase was never so marked as in the xanthochromic fluid associated with tumor. Sugar and salt determinations, where done, were within normal limits. In no case could any organisms in the spinal fluid be demonstrated, with the exception of staphylococcus albus in two specimens, an obvious contamination.

These patients all recovered, apparently completely, with the possible exception of Case 2. There is no proof as to the cause of the hemorrhage. From reading the literature, one is led to guess that they may well have been due to rupture of congenital aneurysms at the base of the brain. One wonders whether these patients will turn up again with further hemorrhages. So far, no one of them has returned to the hospital.

There is no specific treatment. Lumbar puncture is necessary for diagnosis, but, as Symonds points out, lumbar puncture should then not be

done while there is still bleeding. It may be done later to control meningeal symptoms, and should be done at any time to prevent death from increased intra-cranial pressure.

CONCLUSIONS

1. Four cases of spontaneous sub-arachnoid hemorrhage are reported.
2. The cause of the hemorrhage in these cases was not determined; it may have been due to ruptured congenital aneurysms.
3. This accident is probably not extremely rare.
4. The diagnosis is easy, provided the condition is thought of.

5. The prognosis is not necessarily bad.
6. Recurrences would seem probable, but none have occurred in the present series.

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THE VALUE OF THE HISTORY IN TUBERCULOSIS*

BY MARK H. JORESS, M.D.

EVERYONE will agree that the mode of examining a patient has changed from looking at his tongue, feeling his pulse, and, perhaps, taking his temperature, to that of a careful and systematic analysis of the various body systems which so often enables us to get on the right track of our patient's illness.

While a carefully taken history is of the utmost importance in arriving at a diagnosis in any disease, there is probably no other disease in which a complete history is as important as it is in the diagnosis of tuberculosis. Likewise, we must not lose sight of the fact that there are many diseases which simulate tuberculosis, and their symptomatology so suggestive of a tuberculous lesion that only a carefully taken history can help us to get the right insight into the underlying pathology.

The history as taken in a hospital for tuberculosis is not unlike that taken in the general hospital or office, except that certain phases are emphasized, namely: exposure to the disease, mode and habits of living in the particular case and occupation with its possible hazards.

The first consideration is the "family history." The most important aspect of this subject is a history of exposure to some member of the family who has or has had the disease. Such a patient we call a "contact case." A patient will often say that some one in his family has or has had "weak lungs." Such a statement is quite important and should be considered as pointing to a possible exposure to the disease. As regards tuberculosis in the family, it is well known that one has to live in close contact to be infected; and the fact that a patient's grandfather, or grandmother, or aunt, who died before the patient was born, had the disease can hardly be considered a case of exposure or contact. There is a prevalent idea that because there were no other members of a given family

who had the disease the patient at hand cannot have tuberculosis. This is an erroneous assumption.

A history of cancer, Bright's Disease, diabetes or insanity has probably little importance in bearing upon a case of tuberculosis, except, perhaps, the last in which instance the frequent inheritance of a low mentality will make for poor coöperation on the part of the patient in carrying out the treatment, thus making for a poor prognosis of the disease.

The "past history" is the next consideration. In a general way it will help throw some light not only upon the disease at hand but other diseases as well, for a differential diagnosis must always be kept in mind, particularly the differential diagnosis between heart disease, thyroid disease and tuberculosis. We divide the past history into two parts: history of "childhood" and history of "adult life." The first period: the usual diseases of this period are measles, chicken-pox, whooping cough; and they may be considered incidental except that they are predisposing factors because they are debilitating. There are some symptoms which are suggestive of a childhood tuberculous infection which often bear upon a subsequent adult tuberculosis, for example, "glands in the neck." Of course glands in the neck may have been due to many causes, but a history of suppurating glands is very suggestive. In the case of a female patient a history of late appearance of the menses with subsequent prolonged periods of amenorrhea are suggestive of a weak organism. Sometimes the young girl is called "anemic." Amenorrhea and anemia are often manifestations of a juvenile tuberculosis, at all times a potential ease of adolescent tuberculosis. Other names often given to juvenile consumptives are "weak child," or "thin child," "serofulous child," or "rapidly growing child."

The "past history of adult life" is next looked into. A review is made of any diseases

*Read at the Tuberculosis Course at the Rutland State Sanatorium in May, 1925.

the patient has had, such as, pneumonia, rheumatic fever, heart disease, typhoid fever, influenza, tonsilitis and pleurisy. The fact that a patient has had several serious diseases with their debilitating influence upon the organism makes us speculate on lowered resistance to the tubercle bacillus and subsequent lighting up of a dormant lesion.

It is well worth while to note that the majority of people go through a more or less uniform convalescence from various diseases; thus when it happens that a patient does not convalesce rapidly from a severe pneumonia or influenza infection, the unusually protracted convalescence may be due to a hidden focus of tuberculosis which has become reactivated by the intercurrent illness. As for a history of pleurisy, our best clinicians are of the opinion that the majority of cases of pleurisy, unless associated with a pneumonia, are tuberculous in origin.

As to injuries and operation in the past history, we often get a history that the patient has at sometime sustained an "injured back," or "dropped a stitch in the side" while lifting something heavy. At first we are led to believe that the "injury" was the result of a "strain." This correlation of cause and effect is parallel to the cases of bone and joint tuberculosis occurring in the industrial accident cases where a chronic lesion in a joint becoming reactivated is so often attributed, by the injured party, to a so-called industrial injury whereas as a matter of fact the supposed injury is only a lighting up of a chronic pathologic process. The stitch in the side may have been nothing less than an attack of pleuritis.

As for operations, occasionally a history is obtained of an anesthesia which was followed by a cough that lasted a long time. It may have been an ordinary ether bronchitis; on the other hand, a cough which lasted a long time may have been a flare-up of an inactive tuberculosis.

In a general way a review is made of the various systems of the body and suggestive symptoms are gathered from each which collectively may suggest a tuberculous lesion.

It is well known that tuberculosis, not unlike syphilis, manifests itself by symptoms which are notoriously elusive. These symptoms, while they may not point to a diseased organ, when evaluated, with tuberculosis in mind, may point to a toxemia caused by a diseased organ, e.g., the lungs. It must not be forgotten that toxemia is usually the result of disease, and treatment is uncertain unless we know the cause.

We begin with symptoms of the nervous system. We inquire about headaches, nervousness, loss of vision, dizziness, and the like. The patient may state he or she has been nervous for some length of time. We question our patient closer and find that he is not of a nervous temperament, but has developed this symptom.

Nervousness is a common symptom of early tuberculosis, and while not important in itself will bear weight when all evidence is gathered for making a diagnosis.

It may be stated that many cases of tuberculosis can be diagnosed by the symptoms alone. Symptoms of the special senses of hearing, smell, and speech are next analyzed. The patient may tell us he is subject to recurring hoarseness. Hoarseness may be due to peritracheal lymph node enlargement, incident to a tracheo-bronchial adenitis of tuberculosis, the enlarged glands producing hoarseness by pressure upon the recurrent laryngeal nerve. The common symptom of "catarrh," or as the patient often describes it, "something dripping down from the back of my nose," may suggest an impoverished circulation of the nasal chambers due to general debility with a resulting rhinorrhea. I may note that many patients bring up sputum by clearing the throat (hawking) and this they interpret as coming from the back of the nose, hence, "catarrh."

Turning to the cardio-respiratory systems: We inquire about dyspnea, precordial pain and palpitation, cough, pain in chest, expectoration and hemoptysis. Symptoms of cough, expectoration and hemoptysis are suggestive of tuberculosis and would tend to rule out diseases of the circulation, e.g. mitral disease, aneurysm, or aortic disease, in the absence of endocardial, myocardial or aortic lesions. On the other hand, dyspnea and palpitation often go with a tuberculous toxemia; while precordial pain may be due to a pleuritis involving the left pleura in the region of the heart.

The gastro-intestinal system is next studied. We inquire about loss of appetite, heart burn, indigestion, sour stomach, pains after meals, constipation, diarrhea and rectal abscess. Regarding the appetite: There may be no loss of same, yet careful quizzing will elicit a capricious appetite. Also, there may be a voracious appetite, suggesting, perhaps, a wasting of body tissues due to the disease. If we are thorough in taking the history we may find that the patient eats well and apparently digests his food, yet, he will admit having a "sour stomach," or "heart burn," or is distressed after eating. Loss of appetite, capricious appetite, indigestion, heart burn, or sour stomach are common symptoms in tuberculosis, and unless weighed carefully may lead to a diagnosis of organic stomach disease with a possibility of undertaking surgical interference which is well known to everyone. Marked constipation, or constipation alternating with diarrhea may be due to tuberculosis of the peritoneum and mesenteric glands, existing alone or in conjunction with active lung disease.

We next analyze the genito-urinary systems. There may be a history of bladder irritability, occasional hematuria or cloudy urine. These

symptoms arouse our suspicions for the presence of genito-urinary tuberculosis, and they require intensive study by one trained in urology. The above named symptoms may later on become the external evidence of advanced, and I may say hopeless genito-urinary pathology.

A history of cystitis may be due to a descending infection from a tuberculous kidney above. Cloudy urine may be due to pus along the genito-urinary tract; while hematuria may be due to active, ulcerative disease in a kidney, comparable to hemoptysis of pulmonary consumption.

Venereal disease is next inquired about. The information gathered will depend upon the intelligence of the patient and his willingness to tell the truth, also, upon the tact exercised by the examiner. The importance of obtaining a positive venereal history is obvious. It is important because genital tuberculosis will require treatment quite different from genital pathology caused by the gonococcus or spirocheta pallida. Also, in differentiating systemic syphilis which may give rise to symptoms simulating tuberculosis. Should lues be a complication the prognosis becomes unfavorable.

Habits: The important questions to ask are the number of hours the patient works, the number of hours he sleeps, how often he goes to dances, how much athletics and how much or how little recreation, how much alcohol and tobacco, and living quarters. If our patient tells us he is a hard working man, that he goes to dances 3 or 4 nights a week, and goes to bed late, we can visualize these as contributing factors to breaking down of resistance. Too much athletics at school or later on is a vital factor in lowering the resistance of the individual. It is a well known fact that many athletes suffer from tuberculosis, and it is particularly true of our college athletes. Lest I be misunderstood—I do not mean well regulated athletics under strict medical supervision, but athletics done any old way. It is the constant overtraining and overdoing that saps the athlete's body of its reserve, and reserve gone, he loses vitality and with it resistance to the tubercle bacillus.

As for the working people; while overwork can be considered a factor contributing to the development of tubercle, it is rather a lack of sufficient rest after work that counts against the man or woman. As for alcohol, it lowers the resistance to all infections. Tobacco probably plays a very slight role in tuberculosis, unless it is to act as a smoke-screen in the case of a hacking cough due to tuberculosis and it is called a "cigarette cough."

Occupation: Aside from certain occupations in which the patient is obliged to inhale various forms of dust which may be more or less irritating to the lungs, the outdoor worker is just as

likely to suffer from tuberculosis as his neighbor who works in the factory. We next inquire about the age at which the patient began to work and whether or not he has had a trade. If he had gone to work early, has not been a skilled worker, and has changed jobs often, we can readily see that he has not had a regular life and that fact is frequently the cause of a breakdown from tuberculosis.

After we have made a review of the various systems of the body, and have gathered symptoms from each that may offer suggestive data, we turn to a study of the "present illness." There are, of course, two ways in which to obtain a history of the present illness; one is to have the patient tell his own story; another, is to quiz him about various symptoms in the present illness. If we follow the former method, many patients will place the beginning of their illness at a very recent date. On the other hand, if we quiz our patients being careful not to ask leading questions, we may learn that he or she has not been well for a long time. The following are the symptoms to ask about: fatigue, loss of strength, afternoon flush, frequent colds, clearing of the throat, loss of flesh, and bloody sputum. Fatigue is the most common, and very early symptom appearing in tuberculosis. Patients will state that they hate to get up in the morning in spite of many hours of sleep the night before; or the end of a working day finds them all fagged out. As for loss of strength, many patients are below par for a long time, yet, keep on with their daily grind. Often the question "How do you feel?" may elicit the answer, "fine" but when we ask them, "How long since you felt perfectly well?" the patient will admit that he has not had much "pep" for sometime. If a patient has had a persistent rise in temperature in the afternoon, say to 99.2 or 99.4 for some time, tuberculosis should always be suspected. Of course this temperature would be normal for a child; but this paper deals particularly with adult tuberculosis. In some cases there is no frank fever, yet, a recording chart will show wide excursions (over a degree) between the A.M. and P.M. temperatures. We have many patients in the sanatorium and at the consultation clinics who show this type of chart. The next symptom which is very common in tuberculosis is a history of frequent "colds." Colds may be due to invasions by the pneumococcus, influenza, bacillus, etc., but are frequently nothing less than reactivations of a quiescent tuberculosis. At best they indicate lowered resistance and will merit investigation.

The next symptom is loss of flesh. If the patient is asked whether he has lost any weight, he may say "No" yet, if we inquire about the maximum, the usual, the minimum, and the present weight, we may find that the present weight may be several or many pounds below his

usual weight of a year or two prior to the consultation.

The next symptom is hemoptysis. The patient may deny this but may admit that he has noticed shreds, which look like blood, in the sputum on several occasions. Hemoptysis is one of the most alarming symptoms in tuberculosis and often the only symptom which prompts the patient to seek medical advice. Regarding this symptom, Dr. Lawrason Brown of Saranac Lake says, "Any young person who has hemoptysis should be treated for tuberculosis until it is proved that the same was not due to this disease."

Summary: A carefully taken history is of

the utmost importance in arriving at a diagnosis in any disease, and particularly so in the diagnosis of tuberculosis. Many cases of tuberculosis may be diagnosed by the symptoms alone and with a small margin of error. A differential diagnosis should always be kept in mind. Symptoms of fatigue, loss of strength, persistent rise in temperature in the afternoon and indigestion should arouse our suspicions and that the case will bear watching with a view of establishing a diagnosis of tuberculosis. A history of hemoptysis should be considered tuberculous in origin until proved to be due to some other cause.

REPORT OF A CASE OF URETHRAL CALCULUS IN A CHILD

BY HAROLD A. CHAMBERLIN, M.D.

THE following case is reported because urethral calculus, while of infrequent occurrence, should be remembered as a cause of incontinence or retention of urine in children.

A boy of 3 years was admitted to the hospital on Oct. 10, 1925.

The history given by the mother was: severe pain on urination and constant wetting for 5 weeks.

There had been no previous illness and the general physical examination was negative.

On urological examination the bladder was found distended to two fingers breadths above the pubes. The meatus was inflamed and there was a continual dribble of urine.

A small hard mass could be felt in the mid line just posterior to the peno scrotal angle.

The urine was clear, yellow, acid in reaction, contained a faint trace of albumin and no sugar. The sediment showed calcium oxalate crystals, several red blood cells and a few pus cells.

On Oct. 13 a report of the roentgenologic findings was as follows. There is a circumscribed area of density in the pelvis which has the appearance of a stone in the isthmus of the prostate or in the urethra. It is rather low for the bladder.

On Oct. 14 a roentgenologic study of the kidneys and ureteral fields was negative.

While the stone could be felt in the anterior urethra it seemed wiser because of its apparent size to remove it by external urethrotomy than to attempt to draw it through the urethra.

On Oct. 15 a slightly roughened calculus about the size and shape of a pea bean was removed by external urethrotomy. The urethra was not sutured. A small drain was inserted down to it and the skin wound closed.

Convalescence was uneventful. Urinary leakage through the incision had stopped on the fourth day after operation and the child left the hospital on the eleventh day able to void normally and with the wound healed.

It is probable that urinary lithiasis is nearly

as common in children as in adults. In a series of 5900 cases of urinary calculi reported by Civiale, 45% occurred in children.

Holt in a thousand autopsies found that small calculi are common in infancy and writes that stones are frequently voided during the first two years of life.

In 1922 Thomas and Tanner collected reports of 203 cases of urinary calculi in children. They found that in 69% the stones had passed into the bladder or urethra. They believe that most stones pass rather easily down the infant ureter and only a small number remain in the kidney. In 12% of this series the calculi had become lodged in the urethra.

Regarding stones incarcerated in the urethra Englisch has found that more than $\frac{1}{2}$ occurred in children and that most cases were observed in the second year and between the 11th and 15th years.

While nearly all urethral calculi come from the kidneys, a very few are probably formed in congenital diverticula of the urethra. Occasionally multiple urethral calculi are found. Geis Dudenhofen mentions a case in which there were 12 stones, all faceted and one behind the other.

Collins found a large calculus impacted in the distal end of a child's urethra. This was removed and during the next few weeks several small stones were passed.

As in the case described above the local physician, the first to see the child, failed to recognize the cause of his suffering and advised poulticing "to relieve the inflammation," it has seemed worth while to report it and to call attention to calculus of the lower urinary tract as a cause of obstruction in children.

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**Case Records
of the
Massachusetts General Hospital**

ANTE-MORTEM AND POST-MORTEM RECORDS AS USED IN
WEEKLY CLINICO-PATHOLOGICAL EXERCISES

EDITED BY
RICHARD C. CABOT, M.D., AND HUGH CABOT, M.D.
F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 12081

MEDICAL DEPARTMENT

A Portuguese-American schoolgirl of ten entered July 6 complaining of shortness of breath and palpitation. Her mother, who was living, had an arrested tuberculosis. At two years old the child broke a femur. Before the removal of her tonsils at five years she had frequent sore throats. For a period she had occasional vomiting with no apparent cause, lasting a day or two, usually accompanied by constipation, to which she had a tendency. During the winter before admission she had frequent colds and three or four attacks of sharp pain over the cardiac region when she was playing, lasting a few minutes.

The January before admission she seemed disinclined to play, lost appetite, and was occasionally dizzy. Then she showed nervousness and jerking of the neck and arms. The movements ceased three weeks before she came to the hospital. Two weeks later she began to be worse, had steady dull pain for three days, then dyspnea even when lying still. The right knee became increasingly painful. Edema of the groins developed a week before admission, then of the ankles.

Examination showed a pale, tired looking child with dark circles under the eyes. There were several carious teeth. The apex impulse of the heart was in the nipple line. There was no enlargement to percussion. (Right border 2 cm.) The rate was slightly above normal. All over the precordia, loudest at the apex, and replacing the first sound, were "swish-swish" systolic and diastolic murmurs. The pulmonary second sound was loud and sharp, the aortic second not distinct. Just inside the nipple line was a loud sharp heart sound, diastolic (?), which came and went. The murmurs were transmitted to the axilla, the back, the neck, and

there was a suggestion at the elbow. There was capillary pulse. The blood pressure was 98/50—100/50. Electrocardiogram showed normal rhythm. The finger tips were broad, suggesting the beginning of clubbing. There was swelling and tenderness of the right knee and ankle.

The temperature was 100.2° to 97.7°, rectal, the pulse 80 to 120, the respiration 20 to 39. The urine showed diacetic acid at one of three examinations, specific gravity 1.006-1.012, amount 25-46 ounces. The hemoglobin was 85 per cent. There were 16,200 to 9,400 leucocytes, 70 per cent. polymorphs. The reds were normal. A Wassermann was negative.

A seven-foot plate of the heart (see Plate 1) showed increase in the width, especially to the right (5.7 cm.) The outline had a round rather triangular shape more suggestive of dilatation involving especially the auricular region than of pericarditis with effusion.

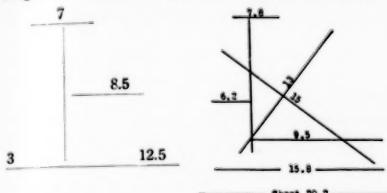
Under aspirin the joint pains, temperature and leucocytosis subsided. By July 15 the heart action was slow and regular. No murmurs were heard at the base or under the sternum, and the pulmonic second sound was not accentuated. The first sound at the apex was masked by a rough systolic murmur. The second sound was weak and followed immediately by a blowing murmur. At her discharge July 21 there was no evidence of active disease.

The following November she came to the Out-Patient Department feeling well and with no heart symptoms, but complaining that a slight vaginal discharge which she had always had had become profuse. She was found to have gonorrhreal vaginitis, for which she was treated at a hospital for three months and a half. At her discharge March 15 her heart was in good condition. Two months later she came back to this Out-Patient Department complaining of vomiting and fever. She was told to stay in bed.

March 15, four years later, she reentered the wards. For six months she had not felt well, and for five months had been in bed with dyspnea and orthopnea. For six weeks she had had an evening elevation of temperature to 102°.

Examination showed a poorly developed and nourished girl of fifteen, pale and orthopneic. The lungs showed atelectatic or moist rales at the left base and a few at the right. There were possible muscle sounds in the right infraclavicular area. The chest was prominent over the heart region. There was a questionable old Harrison's groove, and a possible Broadbent in the left axilla, eleventh and twelfth spaces. The apex impulse of the heart was felt in the anterior axillary line at the sixth rib.

The percussion measurements are shown in the diagram. The cardiohepatic angle was slight-



Measurements by percussion.

Measurements by X-ray.

ly obtuse. The pulmonic second sound was markedly accentuated. A harsh systolic murmur was heard over the precordia, loudest over the fourth interspace and the sternal junction, with wide transmission; thought to be possibly of pericarditic origin. No second sound was audible at the apex. A soft diastolic (?) was present. The blood pressure was 80/55-70/40. The liver dullness extended from the fifth rib to three centimeters below the costal margin, where the edge was felt. The spleen was palpable four centimeters down. (Another examiner found "a ballotable mass on the right at the level of the navel,—liver or kidney?" and found the lungs and the cardiohepatic angle clear.) The knee-jerks were sluggish.

The temperature was 98.3° to 103.7° by rectum, the pulse 80 to 139 at the apex, with a deficit of 3 to 12. The respirations were 29 to 48. The urine showed a very slight trace of albumin at all of three examinations; no other abnormalities. The renal function was 20 to 40 per cent. The hemoglobin was 45 to 50 per cent. The leucocytes were 10,200 to 27,600, the polymorphs 69 to 78 per cent., the reds 4,400,000 to 2,624,000, with slight to considerable achromia at both of two examinations, moderate variation in size and shape at one. There were 2.4 per cent. of reticulated cells. No phagocytes were found. A Wassermann was negative. The non-protein nitrogen was 26 mgm. The bleeding time was three and a half minutes. A vaginal smear showed myriads of cocci and diplococci in and about cells, but no definite phagocytosis. Two other smears showed no Gram-negative intracellular diplococci. Two blood cultures showed streptococci, not hemolytic.

X-ray (see Plate II) showed practically the same findings as at the last observation except that there had been still more increase in the size of the heart. The measurements are shown in the diagram. A large part of the left lung field was obscured. The visible portion and also the lower two-thirds of the right lung field showed some diffuse mottling.

The girl grew worse, had a "tight" feeling at the heart, then precordial pain, and March 23 died.

DISCUSSION

BY MAURICE FREMONT-SMITH, M.D.

Arrested tuberculosis in the mother carries no more risk of transmitted infection to the child, strangely enough, than does rheumatic heart disease in one of the family. It is interesting that St. Lawrence found an extremely high incidence of rheumatic infection in the families of children with rheumatic fever or chorea.

The question of tonsillectomy is one of the most difficult to decide. Even in the normal child, if the tonsils are the seat of frequent inflammation, if peritonsillar abscess has ever existed, if the tonsils are, even without history of sore throat, very large, or if there are palpable tonsillar or other cervical glands or a tuberculous adenopathy, the tonsils must be removed. We are yet in the dark, however, as to the effect of tonsillectomy in preventing second or recurrent attacks of rheumatic fever or chorea. We do not know whether to remove, in rheumatic children, innocent looking tonsils with the hope of finding possible infection at the bases or to remove only those showing palpable lymph nodes or other definite evidence of infection as St. Lawrence advises. We all recognize, however, especially in the northeastern part of the United States, how frequently sore throats and rheumatic fever are associated. Of course each case must be treated individually, but it is very definitely my feeling and that of others studying this subject that in the child who has shown one attack of rheumatic fever or chorea it is in the long run safer to remove the tonsils even though there be the slightest or even no definite evidence of focal infection.

It is hard to see the significance of the pain over the cardiac region. We are unaccustomed to associate pain with the early stages of rheumatic heart disease unless pericarditis is present. Occasionally these cases will have pain associated with a short period of paroxysmal tachycardia. Frequently also in young adults there will be associated with the actual rheumatic heart disease symptoms of effort syndrome, amongst which pain is often outstanding.

Whatever the mechanism, however, cases of marked mitral stenosis certainly do complain of pain in the precordia unassociated with disease of the pericardium. Whenever a child who has been previously healthy shows disinclination to play and loss of appetite he should immediately be put to bed and watched, his temperature taken, and if no abdominal pain be present, a cathartic given. If the child is not all right the next day he is probably really sick and should be under medical care. Tuberculosis in one form or another, especially tuberculous meningitis, often begins in this way, as do nephritis and cardiac disease and other low grade infections.

The close association of chorea and rheumatic fever in this case is interesting as showing the almost certain common background for both diseases. We had one case in the Good Samaritan Hospital which came in with chorea and after several weeks in bed developed acute rheumatic fever. The association is, however, com-

matism" in children as well as in adults, and acute osteomyelitis or the bilateral synovitis of the knee joint which occurs in congenital syphilis (and which appears first as a monarthritis) is overlooked.

It is surprising that there was no enlargement of the heart made out by percussion. It is ex-

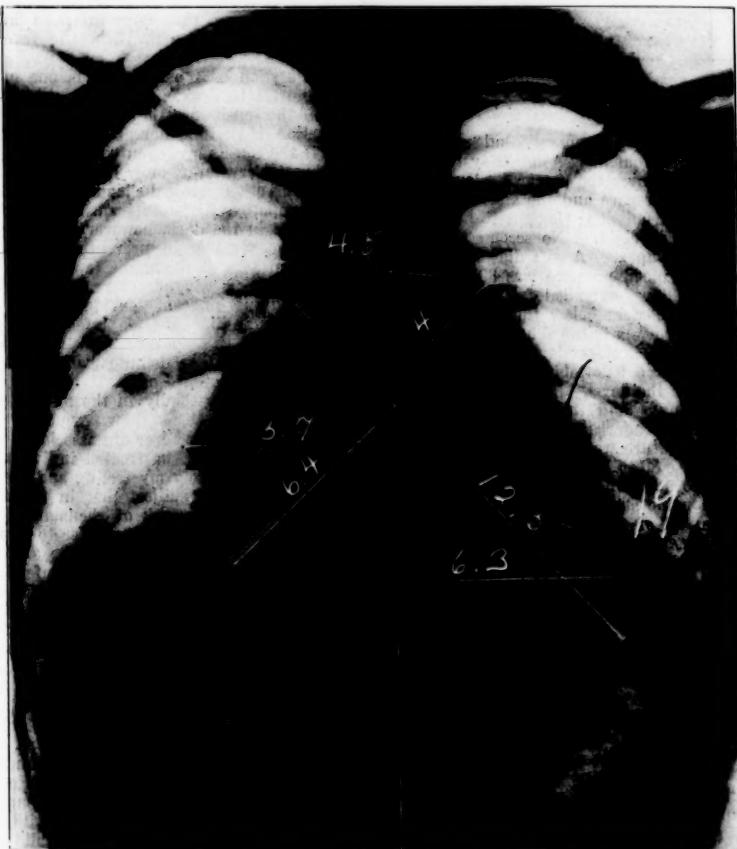


PLATE I. July 7, 1929. Shows increase in the width, especially to the right. The outline has a round rather triangular shape more suggestive of dilatation involving especially the auricular region than of pericarditis with effusion.

monly not so close as to time. The usual story is either that of chorea, or of rheumatic fever with months or even years later a recurrence of the same or the other form of rheumatic infection.

Pain in the knee in this case was unquestionably of rheumatic origin. Too often, however, joint pain is mistakenly assumed to be "rheu-

tremely rare for the child to develop marked signs of cardiac failure without having definite enlargement of the heart. Even if the outlines were not made out there should have been a heaving impulse and a palpable and visible pulse over too large an area of the chest. What is the normal rate for a child of ten? We have found that the pulses in children vary so easily

that it is extremely difficult to state that a pulse is abnormal unless it persists at a definitely high level. I should feel that a pulse of ninety to one hundred in a nervous child of ten being examined for the first time might well fall later to normal. Children under excitement will very

story of chorea, arthritis, dyspnea and edema. The stethoscope gives us our first positive evidence of heart disease. There can be no question in this case of functional or anemic murmur. There is evidence of mitral stenosis and aortic regurgitation. The presence of these very

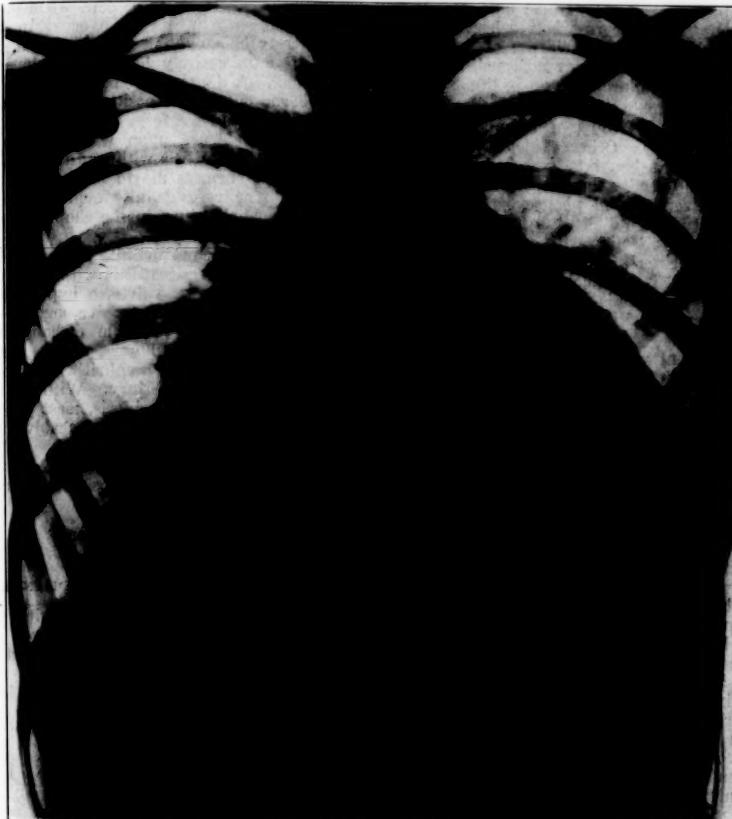


PLATE II. March 18, 1925. Shows practically the same findings as at the last observation except that there has been still more increase in the size of the heart. (See diagram.) A large part of the left lung field is obscured. The visible portion and also the lower two-thirds of the right lung field show some diffuse mottling.

often show pulses of one hundred twenty to one hundred thirty.

A diagnosis of rheumatic heart disease in a child can usually be made, and is often best made, before the stethoscope is put upon the chest. If such a diagnosis cannot be made without the use of the stethoscope cardiac disease is either very slight or absent. In this case we may well suspect rheumatic disease from the

marked murmurs throws considerable further doubt upon the correctness of the percussion. This heart must certainly be enlarged.

The electrocardiographic report is quite unsatisfactory. Normal rhythm we could well determine with our fingers. Auricular fibrillation only most rarely occurs in children. What we do want to know from the electrocardiograph, and the only information it can give us

besides that which we may get from physical examination, is as to the conduction situation within the heart. Is there or is there not block, and if present, of what type? It is very interesting that transient block lasting for a few minutes or a few hours occurs rather frequently in acute rheumatic fever and may occur without other evidence of cardiac damage. It will be interesting to learn whether hearts showing this condition and no evidence of valvular injury will show persistent myocarditis and develop cardiac failure later on in life.

The hemoglobin of 85 per cent., if correct, suggests that we are not dealing with bacterial endocarditis. Other evidence of this disease, however, should be searched for: spleen, clubbed and tender fingers, petechiae, blood in the urine, endothelial phagocytes in the blood smear. It is often difficult to tell even by X-ray whether one is dealing with an enlarged dilated heart or pericarditis with effusion. Especially in children it is extremely difficult to make this differential diagnosis by physical examination alone. Occasionally only the needle will solve the problem.

The patient was discharged two weeks after her admission. The history states that at her discharge there was no evidence of active disease. I seriously question this statement. To my mind the mere fact that there had been unquestionable active endocarditis two weeks previously is the strongest reason to believe that active endocarditis was still present. If the child was discharged, it should only have been to another hospital where she might lie four to eight months upon her back. It is the most difficult thing in the world to decide that any given case has been protected against further injury by long rest in bed. There is no way of proving that the individual case would ever have had further rheumatic infection or that the lesion would have been progressive had the child been up and about; on the other hand, the clinical experience of a large number of the masters in medicine has been that the child with active endocarditis should be kept in bed from four to eight months after all evidence of active endocarditis has disappeared, as the only known means of protecting him against progressive cardiac mischief.

Her return to the hospital four years later showed that the heart had undergone during this period progressive damage. The blood pressure shows evidence of cardiac failure, as do the other physical signs. The spleen is unusually large for that in chronic passive congestion and makes one think either of some blood disease such as leukemia, or bacterial endocarditis, where the spleen is sometimes unexpectedly large, or of an old malaria. It is surprising that there are no red cells in the urine, a finding which we should expect on the basis of chronic passive congestion alone. Possibly the

urine was not examined fresh and the red cells had become dissolved. The renal function is pretty nearly normal, as we would expect. The hemoglobin is now low, definitely suggesting bacterial endocarditis. The leucocyte count is also higher than that found in rheumatic infection alone. The absence of endothelial phagocytes means little, as these cells when present in bacterial endocarditis often occur in showers and may be caught in a smear taken a few hours after an entirely negative specimen has been found. A diagnosis of bacterial endocarditis is borne out by the positive blood cultures.

As far as I can see from the written history there is no evidence upon which to make a diagnosis of pericarditis with effusion, although it would not surprise me to find an adherent pericardium or very definite evidence of previous pericardial injury in the shape of adhesions and thickening.

There will be found definite evidence of old chronic and acute endocarditis with fresh vegetations upon the heart valves, a hypertrophied and dilated heart, chronic passive congestion of all the organs, and probable emboli in the spleen, possibly in the kidneys. There may be an associated mild acute nephritis, but no evidence of severe kidney injury. With the family history a healed tuberculosus, most probably of the bronchial glands, less probably of an apex, may be found.

CLINICAL DIAGNOSIS (FROM HOSPITAL RECORD)

Rheumatic heart disease.
Mitral stenosis and regurgitation.
Subacute bacterial endocarditis.

DR. MAURICE FREMONT-SMITH'S DIAGNOSIS

Chronic and acute endocarditis with fresh vegetations upon the heart valves.
Hypertrophy and dilatation of the heart.
Chronic passive congestion, general.
Probably emboli in the spleen, possibly in the kidneys.
Possible healed tuberculosis of the bronchial glands.

ANATOMICAL DIAGNOSIS

1. Primary fatal lesion

Chronic and acute endocarditis of the mitral valve.

2. Secondary or terminal lesions

Hypertrophy and dilatation of the heart.
Chronic passive congestion, general.
Slight hydropericardium and ascites.
Septicemia, streptococcus viridans.
Localized peritonitis.
Infarcts of the spleen and kidneys.

3. Historical landmarks

Slight chronic pleuritis, left.

DR. RICHARDSON: The head was not examined.

The skin generally was sallow and somewhat waxen.

The peritoneal cavity contained about 300 c.c. of clear amber colored fluid. The peritoneum of the lower half of the cavity was negative; but over the lower part of the liver on the anterior and inferior surfaces there was a small amount of fibrinous exudate, as well as about the spleen, which was weakly adherent to the parietal peritoneum at one place midway on its superior surface. Here there was considerable fibrinous exudate which coated the peritoneum over a large area.

The gastro-intestinal tract showed chronic passive congestion but was otherwise negative.

The anterior margin of the liver was 10½ em. below the costal border in the right mamillary line. The diaphragm was at the fifth rib on the right, at the lower border of the sixth rib on the left.

In each pleural cavity there was a small amount of thin, fairly clear, pale brownish fluid. There were a few pleural adhesions at the apex on the left. No thymic tissue was found. The trachea and bronchi contained much brownish-red frothy fluid. The mucosa was brownish-red. The bronchial glands were slightly enlarged, brown-red and juicy.

The apices of the lungs were negative. There were no areas of consolidation. The tissue generally showed chronic passive congestion.

The pericardium contained about 250 c.c. of thin clear brownish fluid; otherwise negative. The heart weighed 430 grams, much enlarged. The myocardium was of good consistency and pale brown-red. The right ventricle wall was 5 mm. thick, the left ventricle 11 mm. The columnae carneae were well marked. Cavities: Left, considerable dilatation of the auricle; ventricle negative. Right, slight dilatation of the ventricle, much dilatation of the auricle. The circumference of the mitral valve was 8 cm. There was some diffuse fibrous thickening and deformity of the curtain, best marked in the region of the posterior cusp. This was associated with smaller and larger brownish-red thicker and thinner patches of fibrinous material and small tags which extended in several places down along the chordae tendineae, giving them a beaded appearance. One of the patches extended up on the endocardium of the left auricle over an area 3 by 4 cm. These patches of vegetation at their bases presented a firmer, more fibrous-like material. The chordae tendineae showed some shortening and thickening. The other valves were negative. The auricular appendices and coronaries were negative. The aorta and great branches were negative except that the intima of the aorta showed much purplish staining.—sepsis.

The liver showed chronic passive congestion.

The spleen weighed 230 grams, moderately enlarged. The tissue generally was pale purplish-red and mushy. There were numerous frank infarcts. Some were brown, homogeneous and rather firm, while others were dark brownish-red and rather soft. The largest infarct, 4 cm. across, showed pale brown-red marginal portions surrounding a soft dark brownish-red central mass. The outer surface of this infarct was weakly adherent to the parietal peritoneum in the region of the area of peritonitis previously mentioned. This infarct then was the source of the peritonitis.

The kidneys showed congestion. In each kidney there were several infarcts.

The culture from the heart blood yielded a profuse growth of the streptococcus of the viridans type.

CASE 12082

NEUROLOGICAL DEPARTMENT

A Canadian nurse twenty-eight years old was brought to the Emergency Ward November 19, 1925, unconscious. The history was given by her mother. The chief complaint was pain in the back of the head followed by "sleeping spells". The patient had pneumonia and influenza in 1918 with heart complications. She had occasional palpitation, precordial pain and night sweats. In 1923 she had appendectomy. She fainted easily and often, sometimes every day, with remissions for months. Her vision was occasionally blurred after her attacks. She had a goiter which was disappearing. She was usually a happy and contented person and was a successful nurse. Recently she had been discouraged and worried.

In January 1921 she felt tired and run down and had a headache which lasted for three days. After this she was apparently in coma for three days and was aroused only by electrical stimulation. A year later, after an anesthetic for tooth extraction, she again had to be aroused in a similar way after apparent coma for four hours. In 1923 after a nerve-racking automobile experience which made her hysterical she had a severe occipital headache which was relieved after twelve hours only by a grain of morphia in divided doses. Immediately after this she went into apparent sleep from which she could not be roused. Since this time she had had increasingly severe and frequent attacks characterized by severe pain in the occipital region, usually throbbing but lately steady, requiring morphia for relief. The pain started any time of the day or night, usually gradually, and became more and more severe. She often bit herself. After relief from morphia she would fall suddenly into an apparent deep sleep from which she could not be roused

by ordinary methods. The pain in the head usually lasted twelve hours and the comatose condition two days. During the coma she turned over occasionally. Usually her eyes were closed and she was continent, but recently she had voided involuntarily. When her eyes were open during the attack she complained of blurred vision immediately upon waking up. Except for two attacks she had always been aroused by a "chiropractic adjustment" or by electrical stimulation. In one attack which began in the usual way she had during the coma twitching of the face, arms and legs, and had spasms in which she arched her back. After unsuccessful attempts to arouse her by chiropractic she awoke spontaneously with terrific pain in the occipital region.

Upon regaining consciousness the patient verified the history given by her mother and added operations for the removal of two small toes because they turned blackish and were cold and numb, becoming so over a period of six months. The immediate cause for their removal was "infected corns". Later the fourth toe on the left foot was amputated, being a "hammer toe" and "in the way".

Psychological summary, by Dr. Emerson. Patient first seen at request of Dr. Mixter November 23, 1925. Pain in head traced to electricity given to wake patient from a pathological sleep (60 hours). Morphine given for nearly four years, on account of pain, with exception of eight months from June 1924 to February 1925 with one heavy dose in September 1924 (after ditching her car). With the support of Dr. Vietts and Dr. King morphine denied and patient agreed to coöperate. Improvement begins. Pathological sleep traced to overwork by a naturally hysterical person. (Sleep-walker from earliest childhood.) Overwork due to desire to forget tragedy of engagement broken because of duplicity of fiancé.

Examination showed a well nourished young woman lying quietly, relaxed, apparently asleep. She could not be roused. When seen later she was tossing, turning, grinding her teeth, holding her hands at the back of her head and occasionally crying. The skin was dark, with slight brownish mottling over the back and brownish pigmentation over the abdomen. There was horizontal nystagmus. Many teeth were missing. There was evidence of slight pyorrhœa. The tonsils were red and of moderate size. There was very little chest breathing. The heart, lungs and abdomen were normal. The radials were slightly thickened. There was a left rectus operative scar 15 cm. long. The right fifth toe and the left fourth and fifth toes were amputated. The pupils showed questionable accommodation to distance. There was questionable lid lag. The knee-jerks were hyperactive. Romberg was positive. She fell backward.

The temperature was 97° to 99°, the pulse 69 to 92, the respiration normal. The amount of urine is not recorded, specific gravity 1.020, 2-5 leucocytes per high power field. The blood was normal. A blood Wassermann was negative.

The patient was entered in the surgical service and put in the care of Dr. Mixter, who asked the Neurological Department to do a complete neurological examination and lumbar puncture. The neurological examination showed only one positive finding, staggering wobbly gait, in addition to those already recorded. Lumbar puncture gave 10 c.c. of clear fluid, initial pressure 100, jugular pressure 250, rapid rise and fall; after withdrawal of 4 c.c. pressure 10. Cells, 2 leucocytes, 1400 red corpuscles. Protein 74 (probably due to blood). Wassermann negative. X-rays of the skull were negative. An oculist reported, "The patient is a high myope. The fundi show only the characteristic myopic changes, i.e., small vessels and choroidal crescent. There is a fine vertical nystagmus that can be controlled by fixing. The disc outlines are distinct. A shallow physiological cupping can be seen; i.e., the eyegrounds are negative. The fields are not possible in the patient's present condition." Dr. Emerson reported November 24, "To my mind the pain is undoubtedly functional. Advise all the sleep possible. Will watch and analyze the condition as far as possible."

November 28 the headache and head jerking stopped and the patient slept all night after a fifteen grain dose of veronal. The next morning the left side of her head felt sore. She was cheerful and her appetite was excellent. She had another good night. The morning of the 29th however she was writhing with pain in the back of her head, grinding her teeth, tossing, and arching her back. November 30 she was still jerking her head and complaining of great pain in the occipital region. She was now transferred to the Neurological Service. All medication except catharsis was stopped by Dr. Emerson's advice.

All went well until December 7, when the patient was suddenly seized with an attack of violent head pain. After writhing for three hours with this she asked for the head nurse, and in her absence asked to see the doctor, but made no request for medication. By the advice of Dr. Emerson the proposed plan of no medication was carried through. The pain lasted somewhat longer than usual, but was perhaps less severe than usual. It ceased late that night. December 16 the patient told the head nurse that "she felt much better now that Dr. Emerson through psychoanalysis had found the cause of all her trouble." December 23 she had had no headache for a week, and was bright and cheerful. She continued to feel well, and January 1 was discharged.

HISTORY AS SUMMARIZED BY THE PATIENT

1922

Jan. 4 First pathological sleep.
Jan. 6 Wakened by strong electric treatments.
Off duty till March 1.
Mar. 6 First attack of severe pain in back of head.
Relieved by morphia.
Mar. 12 Second attack, also relieved by morphia.
Mar. 14 Off duty till May 2.
Apr. 6 Third attack—from this on attacks occurred about every five to eight weeks.

1923

Jan. 12 (about). Took gas at dentist's to have tooth extracted at 1:30 p. m. Wakened by electric treatment about 3:30 p. m.
July 22 Two toes amputated (local anesthetic used).
Dec. 26 One toe amputated (local anesthetic used). Infected third day.

1924

Jan. 19 Bone of left foot curedtted.
June 27 Started taking chiropractic adjustments for pain in head. Pain relieved.
Sept. 13 Badly frightened by dynamite explosion. Morphia, chloroform, electric treatments, etc., given at hospital.
Dec. 18 Sixteen hour pathological sleep. Wakened by chiropractic adjustments.

1925

Jan. — Gave up work at Dr. A.'s and Dr. B.'s advice.
Feb. 10-16 Electric treatments given for pain in head. Pain worse after treatments. Morphia given. Attacks of pain more frequent, about every other day. Getting very little sleep.

May 2—June 16 During this time I did not waken once normally. Wakened by chiropractor. Attacks of pain about every third day. After getting about from this siege was very nervous. Could not meet people or go into a store or even a neighbor's home.

Sept. 16 Slept twenty hours. Wakened by chiropractor.

Sept. 19 First time adjustments would not relieve pain. Dr. A. called; morphia given.

Sept. 20 After eighteen hours' sleep was wakened by pain in head.

Sept. 24 Chiropractor unable to stop pain, and nurse failing to get Dr. A. called Dr. C., who came and at once started to find fault with me for having a chiropractor treat me. Fakir, as he termed him. Called me a drug addict. Said the pain in my head was imaginary, sleeping spells were hysteria, etc., etc., and that he could cure them.

Sept. 25 Pain in head kept getting more frequent and more difficult to control.

Oct. — Plans started to take me to Boston to the Massachusetts General Hospital.
Nov. — Pain in head continued to get worse. Three times had spasms of head twitching backward with pain in head.
Nov. 19 Entered Massachusetts General Hospital.
Nov. 23 Dr. Emerson's first visit.
Dec. 3 Took morphia for pain in head. (*Last time.*)
Dec. 7 Pain in head began at 1:30 p. m. Pain stopped the next day at 3:30 p. m. (26 hours). Did not take *anything* for pain.
Dec. 10 Pain started 11:30 p. m., lasted till 2:45 a. m. (3 hours).
Dec. 13 Pain started at 10 p. m., stopped at 3:30 a. m. (5½ hours).
Dec. 15 Pain started at 7:30, stopped at 5 a. m. (10 hours).
Dec. 17 Pain began at 10 p. m., stopped 11:30 p. m. (1½ hours). Sat up in chair.
Dec. 20 Darting pain in head less sharp and not so frequent. 9:20 a. m. Sitting up in chair talking to nurse (who was making my bed) about nursing in Maine being hard on account of so much twenty-four hour duty, felt dizzy and weak, asked her for fresh water. I lost consciousness and slipped out of chair to floor while she was gone for water. Was unconscious only two or three minutes.
Dec. 21 About 11:30 p. m. head pained for about two minutes. Darting pains less frequent during day.

DISCUSSION

BY HENRY R. VIETS, M.D., AND
L. EUGENE EMERSON, PH.D.*

NOTES ON THE HISTORY

DR. VIETS: In the history the important thing to point out is that this woman suffered from extreme pain. That was the major symptom and had been for a number of years. The pain was occipital, severe enough to throw her into spasm, and had been relieved only by morphia for practically the whole period. If we look a little at her history we see that her family had various structural diseases, heart trouble, kidney trouble, tuberculosis. The patient herself had a severe infection with pneumonia and influenza and certain heart complications. She had appendicitis later, and she had a goiter. There are a good many factors here that came into her life from the pathological side, all of which must have played some part in her mental outlook.

She had coma of various types, some of which are more important later in her present history. But severe illnesses, pneumonia and influenza especially, have often led to conditions later of

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a mental type. She also had, after the periods of severe pain, coma lasting from hours to days, a very unusual affair, and one that would immediately make us feel that this was a non-structural type of disease.

NOTES ON THE PHYSICAL EXAMINATION

In the examination the first thing that has to be noted is the character of these attacks: turning, grinding of teeth, holding hands at the back of her head, and later arching her back. Opisthotonus especially is thought to be fairly characteristic of a hysterical attack. We see opisthotonus in some other conditions, extreme strychnin poisoning for example, but not in a case like this in which recovery from the attack took place. That in itself would be suggestive of a hysterical attack.

The horizontal nystagmus cannot usually be explained on such grounds, although it is not necessarily a sign of structural disease. Accommodation to distance is not so important a sign from the neurological point of view as accommodation to light,—there are very many causes of disorder of accommodation to distance. It may easily be on a functional basis.

The positive Romberg again is a sign that is not definitely a sign of structural disease. It is a sign that may be easily imitated by a malingerer and may often be found in a hysterical person. It leads to a difficulty of gait, and we find later that she had a staggering, wobbly gait. The spinal fluid I should consider negative except for the rather marked fall in pressure after the removal of only four cubic centimeters of fluid,—a point I cannot explain.

DIFFERENTIAL DIAGNOSIS

The differential diagnosis would be, I think, four conditions. (1) In the first place, is this patient a victim of morphia? We know that she had taken morphia for four years at the instigation of her physicians or possibly of her friends for the pain. So far as we know she did not take morphia at other times. From the history she might be a morphine addict. On the other hand, we do not see the characteristics of morphinism, in which there is after a period—certainly after four years' duration—of distinct increase in the amount of morphia that is necessary to control the attack, a certain amount of deterioration both mental and physical, the mental state characterized largely by fabrication. The patient is almost sure to be after two or three years of morphinism an extreme liar. I judge from the history that the house service did not think that this patient was a liar. On these grounds, then, I should be rather against a diagnosis of morphinism as the cause of this patient's main symptomatology. She might have acquired some of the characteristics of morphinism, but it would not seem an

adequate diagnosis to explain her attacks entirely.

(2) Occipital neuralgia. Pain in the occipital region was her main symptom, and there is a fairly definite type of neuralgia that is called occipital neuralgia. One usually finds, however, some other characteristics of this syndrome. There is often tenderness along the occipital nerves or tenderness on deep pressure over the muscles, and quite often it is secondary to caries of the spine, which we take it this patient did not have. If she had occipital neuralgia, paroxysmal in type, one would not expect to have such a long condition of coma after these attacks.

(3) A third condition that one ought to consider is intracranial disease, especially disease below the tentorium in the cerebellum. Here is a patient with a staggering gait. There are signs of horizontal nystagmus, and she has extreme pain in the occipital region. Lumbar puncture helps us in this diagnosis as the pressure was within normal limits. If this patient had a tumor of the cerebellum one would expect after four years many more symptoms than she shows at the present time. Between these attacks she is practically normal. With a cerebellar tumor, after three or four years of symptoms she ought to have increased intracranial pressure and probably a secondary hydrocephalus. These findings were not borne out by either the history or the examination.

(4) The diagnosis then, by exclusion, would be a non-structural one, a functional diagnosis, presumably hysteria. I will leave the discussion of that part of it to Dr. Emerson, and he will probably also call attention to the summary of the history as given by the patient herself, who, we remember, was an intelligent nurse and could give a very excellent account of her own history.

DR. KIRK H. PRINDE: The patient was apparently in coma when she arrived in the ward, and remained so for several hours. All attempts to arouse her were fruitless. She was completely anesthetic too, and did not show the slightest reaction to pin-prick, inhalation of ammonia or other means of arousing one from sleep. She did not appear like a sick person, nor did she twitch or have any spasm. Without the slightest history to go on—her relatives not being present—I immediately thought of encephalitis lethargica in spite of the absence of any central nervous system signs or symptoms.

Several hours later I was called to the ward to see a person in anything but lethargy. She was rolling, tossing, and groaning. Instead of complaining, as she might have done, she pinched herself, ground her teeth, and made such grimaces as to make me believe that she was trying to suppress her natural inclination to cry out. At this time she volunteered the information that morphia was the only thing that had ever

relieved her. I think is of interest that from this time until Dr. Viets and Dr. Emerson took over the case and discontinued all medication she had no morphia whatever. We gave her occasional doses of codein, but her principal relief was from hypodermics of sterile water, which she thought was morphine. She was given various sedatives by mouth, but these did not have the effect that her sterile hypodermic injections of water had. We naturally thought of morphinism then, because a few days after she entered we found in her bag a hypodermic outfit with a good supply of morphine, which we confiscated for the time being.

When Dr. Mixter saw her first she had just recovered from her sleeping spell and was tossing about, grinding her teeth, etc. He immediately wrote "Hysteria" above my various diagnoses, and put in a request for a consultation with Dr. Emerson.

DR. JOHN S. HODGSON: As one reads the record I think he is struck with the fact that there is an adequate background for functional disease and very little background for structural pathology. The history is of four years' duration and is that of severe occipital headache followed by attacks of coma lasting several days. Between attacks apparently she was fairly well. Examination showed very little the matter. She never had, apparently, any vomiting or any of the other signs that go with intracranial disease, no disturbance of gait, and any number of signs suggesting intracranial disease were entirely lacking. To be sure she was seen several times in attacks when her head jerked, etc., but aside from that there were no neurological signs. Fundi, spinal fluid, X-rays, were all negative. I cannot conceive of anyone's having intracranial disease for a period of four years and not showing more than she had. I do not need to discuss the differential diagnosis. I think Dr. Viets has done that. It really very quickly resolves itself into a diagnosis of functional disease.

DR. L. EUGENE EMERSON: The summary by the patient was made at my request after we had gone far enough in our conversations for me to get a few ideas as to the cause and effect, and therefore I asked her if she would not pick out important facts and date them and make a record of them merely for my convenience.

The summary I myself have given was an attempt to emphasize only very important points. In my opinion the pain in the head was traced to the electricity given to awaken her from her pathological sleep. That first attack lasted sixty hours. The pain was so intense and the contortions, writhings, and actions of the patient were so obviously the result of agony that morphine was given nearly continuously for each attack in these four years, with the exception of eight months from June 1924 to February 1925. This was during the time when she went to the chir-

opractor, to whom she definitely turned in order to help her to escape from becoming a drug addict, because she felt she was taking too much morphine, and this chiropractor was during that period most of the time able to relieve her from the pain and therefore rendered the morphine unnecessary by what he called his "adjustments". But on one occasion in September, when she ditched her car owing to the unexpected dynamite explosion which took place apparently right under it, he was unable to do anything for her and she had recourse again to morphine. It seemed to me, therefore, that the first thing to do was to get the patient to coöperate in an attempt to stop the taking of morphine. So with Dr. Viets' and Dr. King's backing, who agreed not to give her morphine under any circumstances, I asked her and got her to agree to make the fight against the desire for relief. In other words she agreed to endure the pain. It was at that time that it lasted twenty-six hours. Her improvement began at that time.

The pathological sleep was traced to overwork by a naturally hysterical person. The evidence in favor of her hysterical temperament has been what we have already heard; and then the fact that from very earliest childhood she was subject to somnambulism. Overwork was traced to a desire to throw herself into some occupation in order to forget her broken engagement. This was to her fairly serious, because she was within a very short time of her marriage. The question why she was also so energetic and able to work may perhaps be traced to her mother, who is a very energetic and very efficient sort of woman. Her father, on the other hand, was inefficient.

In a situation of this sort, after the initial difficulty—which to my mind is very great, perhaps not in this particular case, but often is very great—after the initial difficulty of a differential diagnosis has been surmounted and the case has been properly declared to be a case of a functional disturbance, the great difficulty comes in tracing cause and effect in psychogenic disorders. Here it is very easy to fail to see the forest for the trees, and therefore it seems to me important to emphasize just a few of the high points.

I will point out, if I may, three parts, so to speak, to the treatment. I would say that the first part was to gain the patient's confidence; simply to sit down and talk with the patient, ask her questions that will not disturb her particularly, get her to tell the story and accept it or at least appear to accept it without any question whatsoever until one gets something of a birdseye view of the whole situation; then with that grasp of the situation as a whole try to make a few causal sequences which may properly be indicated to the patient if the patient is intelligent enough to understand them.

That is exactly what I did. This is the second part of the treatment, which seems to me important, which I have called the analysis of the birdseye view and the education of the patient into thinking of things in a long sweep with high points which may be regarded as causal sequences.

What I mean may be illustrated by what seems to me possibly a mistake in the very first paragraph of the history. "The chief complaint was pain in the back of the head followed by 'sleeping spells'." Now if I understand it the chief complaint was really sleeping spells followed by pain, and the question was what caused the pain. When she explained to me that she had been awakened from the sleep by the application of electricity to the base of the brain and the spine I thought I saw an adequate cause for the pain in that lightning-like treatment. In talking the matter over it was accepted by her as a cause for the origin of the pain. In the history summarized by the patient it is stated that on January 6 she was awakened by strong electric treatment, but not till March did she complain of severe pain in the back of her head. Therefore even if I am right in thinking that the electricity was a causal agency, it would not be likely that a person would notice that causal relation. But I think one is justified in believing that very likely she made a mistake in saying that the pain was first noticed March 6. If she were questioned a little more carefully I think we should find that she was awakened by horrible pain by the electrical treatment itself. She herself admitted that she was afraid to go to sleep for fear she would be treated by electricity and wake with the pain.

The third point in the treatment of this or any similar case is persuasion of the patient; a persuading of the patient to see these things as they perhaps really are, as they seem to us to be at any rate; not only to see the thing as a whole, but a persuasion of the patient to self-discipline, which was the first important point in this case, when she voluntarily and willingly agreed to stand this pain as long as it might last without asking the doctor for morphine.

I speak of self-discipline because I think this is very important. If it is not a question of self-discipline then I think external discipline should take place. Therefore I was fully ready, if the patient had not been willing to coöperate with me, to rely on Dr. Viets and Dr. King to say, "You shall not have morphine even if you suffer the agonies of the damned." To what extent I should have been willing to carry that I do not know, but I believe in that unlimited discipline.

I should like to make just one remark here as a tentative criticism on the value and practice of hypnotism and suggestion, which seem to me to be a form of discipline. If our theory

is correct—and I think in large measure it is correct—that these conditions are due to dissociations of the personality, one part of the personality in conflict with another part and causing a disturbance, hypnotism or suggestion is only carrying that dissociation one step further with the gaining of power of the part that is in relation with the hypnotizer, which to my mind is just as bad, or may result in worse conditions than those one attempts to cure. In a case like this, merely to cure the pain is not the most important thing. It was important, but before that it was important that the patient give up the desire for relief through morphia, that she should have herself under control. Then she should get rid of the pain. If I am correct in the analysis of cause and effect, the pathological sleep was brought on by the overwork, the overwork was brought on by the misery of the broken engagement, the lost love. Therefore under those circumstances it is important that she herself looks out that she does not permit herself to overwork. Even that is not sufficient, because in order not to permit herself to overwork she must recognize that she is not so strong as some people. She personally cannot work quite so hard as some people, because her father was not so strong as her mother. So I got this particular patient to recognize that she must be careful. She must not push herself so hard as her mother can push herself because she has not her mother's inheritance. She has only half.

A PHYSICIAN: Are these true pathological states in your opinion, or just a functional condition?

DR. EMERSON: I do not know the distinction between a pathological sleep and one from which we cannot wake the patient for sixty hours.

A PHYSICIAN: Do you mean some change in structure?

DR. EMERSON: Then I should not use the word pathological. In New York the other day a doctor told me that the proper term is *sopor*. I spoke of it as pathological because it was so long and because it was impossible to awaken her from her sleep.

DR. MEANS: I should like to ask how she is getting on now? When was it she began to improve?

DR. EMERSON: She began to improve immediately after she made up her mind to give up the morphine. That was on December 7th.

DR. MEANS: Since December 21 how has she been?

DR. EMERSON: It is true isn't it, that the last pain you had was on December 21?

THE PATIENT: Yes.

DR. EMERSON: The next day after refusing to take morphine, December 8 and 9, she did not have any pain. Her head twitchings and various other symptoms improved entirely from

that time. They were getting pretty bad before.

DR. VIETS: Was the electricity strong enough to cause head twitching when given?

THE PATIENT: Yes, it was.

DR. EMERSON: Is it true that the first time you were awakened it was very painful at that particular time?

THE PATIENT: I cannot recall exactly that occasion. But it caused a great deal of pain afterwards. At the time they gave it to me for the pain alone it caused the pain to become a great deal worse.

DR. EMERSON: Where did they give it, just where the pain was?

THE PATIENT: At the base of the skull.

DR. VIETS: Do you know what sort of electricity it was?

THE PATIENT: I really cannot tell you.

DR. VIETS: High frequency?

THE PATIENT: Something of that sort, yes.

DR. VIETS: Still if it caused twitching it was probably galvanic or faradic.

A PHYSICIAN: I should like to ask if she ever had any fear of these electrical treatments in anticipating them?

THE PATIENT: Yes. It caused a great deal of pain, and therefore I did. The second time I was awakened I was more or less hysterical.

DR. VIETS: Did you feel when you came to the hospital that it was probable that you could get away from morphia? Did you feel that it had got such a hold on you that you probably could not get away from it?

THE PATIENT: No, certainly not. I did not care for it in that sense, except to get relief from the pain.

DR. VIETS: It is fair to say that she showed no symptoms or mental attitude of the morphia addict.

DR. EMERSON: Absolutely. You are leaving the hospital tomorrow and you have not had any pain or any twitching? The only symptom since December 21 is the fainting?

THE PATIENT: Yes.

DR. VIETS: Had anyone talked over the mental mechanism of this situation before you came to the hospital? Did you have any grasp of the situation itself?

THE PATIENT: No.

DR. VIETS: Do you think that getting hold of the situation from your point of view was helpful in getting you well?

THE PATIENT: Yes.

LATER NOTES

January 20, three weeks after the patient left the hospital, her mother wrote Dr. Emerson, "She has not had any pain since coming home; but she has gone back to her sleep walking... I think she overdoes. Each time she walks in her sleep, I have noticed, she has been tired when she went to bed... She does not remember

anything about it in the morning... It is so wonderful that she is free of her old pains, and for this great blessing I thank you."

February 8 the patient writes, "Since my return home I have been free from the pain in the head, so of course have not had to take any morphia. So far I have not had any more 'sleepfits'. Am also sleeping better than when at the hospital."

DIAGNOSIS

Hysteria.

CASE 12083

ORTHOPEDIC DEPARTMENT

A married Italian woman twenty years old entered February 8 complaining of pain and swelling of the left knee. In April the previous year she had gradual onset of pain in the knee without definite history of trauma. There had been fluid more or less constantly in the knee. The pain was worse with activity. For the past few months it had remained about the same. For the past ten days it had been much worse without known cause. It had been treated by bandaging and hot fomentations. There was no involvement of any other joints.

Her family history was excellent. Her past history was negative except for influenza six years before admission, in the year of an epidemic. One two-months-old child died of unknown cause. She had a healthy nursing baby two months old. X-ray of the knees in the Out-Patient Department January 18 showed no definite variation from normal.

Upon examination she was well nourished. The lungs were apparently normal. Rectal, pelvic and fundus examinations were not done. The rest of the examination was negative except for the left knee. This was swollen, with marked periarticular thickening, some intra-articular effusion. Motion was limited in extension to about ten degrees and in flexion to about ninety degrees. There was definite tenderness over the internal semilunar cartilage of the knee. Local heat at the anterior aspect of the knee was increased over that of the other knee. There was no atrophy of the calf, but definite atrophy of the thigh.

Before operation the temperature was 97° to 99.2°, the pulse 62 to 110, the respiration normal. The urine was negative. The blood is not recorded.

February 11 another X-ray examination was made. All the parts of the joint and their relations were well seen. In both examinations of the left knee however there was an area of dullness above the extensor tendon suggesting an accumulation of fluid in the capsule. In the plates of the right knee no abnormality was made out.

February 12 operation was done. A week later the wound was healed except for a small sinus at the lower end which showed a small amount of serous fluid. February 21 a second operation was done. The patient made a good recovery, and at the time of her discharge, March 17, the sinus was closing over with healthy granulation tissue.



PLATE I. Taken January 18. Anteroposterior view of the left knee. There is an area of dullness above the extensor tendon suggesting an accumulation of fluid in the capsule.



PLATE II. The same, lateral view. (The negatives of both plates are defaced.)

April 7, three weeks after her discharge, the patient was sent in by the district nurse because the discharge from the sinus was increasing. The history of the interval was otherwise negative.

The general physical examination was as before.

Upon removing the plaster cylinder the knee was found to be in perfect arthrodesis.

Small sinuses at the lower and upper ends of the wound were discharging a small amount of thin serous fluid. There was no tenderness, no heat and no pain on attempted passive motion.

The chart is not remarkable. X-ray showed the outline of the left knee joint somewhat irregular. There were many indefinite shadows in the region of the joint space. There was longitudinal separation of the patella.

There was a very small amount of drainage from the knee. The patient was comfortable. Plaster was applied from the ankle to the groin and a window was cut for the dressing. The patient was discharged April 12 with instructions to walk with crutches.

The records of the Out-Patient Department show that May 1 there was slight redness in the area of the incision. The temperature was 99.2°. May 7 the sinus tract was opened and a rubber tissue drain inserted. Two days later the sinus was discharging. The cast was taken off. The union was solid. May 12 the mouth of the wound was opened and pus was expressed. The wound was dressed with mercurochrome. May 13 there was very slight discharge. May 19 and 26 there was no discharge on pressure. She was able to bear her full weight and was permitted to change from the crutch to a cane. June 21 there was no pain or discharge. She tired easily. August 4 she was in good condition.

DISCUSSION

BY NATHANIEL ALLISON, M.D.

We have a picture of her good knee and of her affected knee, and I think probably these X-ray pictures will indicate as well as anything could the difficulty of making a diagnosis in these cases by the X-ray alone.

DR. HOLMES: I do not think I can say much more than was said at the time of examination. There does seem to be a little bulging of the capsule and the joint space looks wide, as though there might have been fluid in the joint at that time. Otherwise I should not interpret the plate as showing evidence of disease.

In this one, taken after operation, the bones show a moderate degree of atrophy. The joint space on the inner half of the joint is practically obliterated. It is very wide on the outer half. The outline is irregular and on the lateral view we see ragged irregular outline and a very narrow joint space, and there is some thickening in the space above the patella. As far as we could go in the interpretation would be to say that there is a process which had destroyed the joint cartilage on one side more than the other. Any process which would destroy a joint could be present. I do not think we should be justified in saying whether it was tuberculosis or any other. It probably is not trauma. There are no loose bodies about.

DR. CABOT: Could it be syphilis?

DR. HOLMES: I suppose it could, but it is not probable. There is nothing to suggest syphilis.

DR. CABOT: Is there anything characteristic of malignant disease?

DR. HOLMES: No; it is more suggestive of infection of the joint.

A STUDENT: In regard to the narrowing of the space on one side and not on the other, could

PRE-OPERATIVE DIAGNOSIS FEBRUARY 12

Tuberculosis of the left knee joint?

FIRST OPERATION

Gas-oxygen. A midpatellar incision about ten inches long was made and carried down through the subcutaneous tissue and fascia, exposing the patella. The patella was sawed through parallel

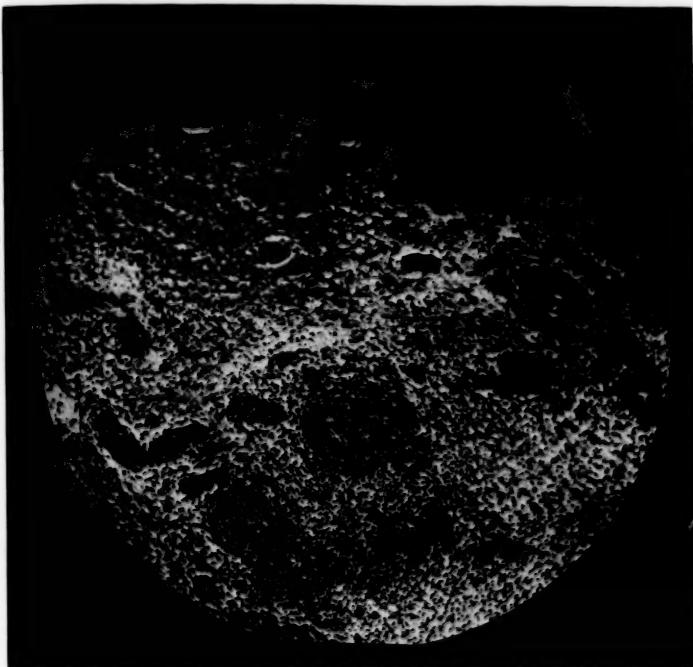


PLATE III. Section from the synovial membrane. Shows an abundant wandering-cell infiltration made up largely of mononuclears. There are occasional focal collections of epithelioid and giant cells. Tuberculosis.

you get that in the hypertrophic type of arthritis? Does that ever give a picture that could be mistaken for this?

DR. ALLISON: I think not. There is no sign of hypertrophic arthritis here.

A STUDENT: I meant the wearing down of the cartilage on one side and not on the other.

DR. ALLISON: I do not think that this picture shows that. It is very hard to see the shadows of the cartilages in the X-rays.

DR. HOLMES: But when the cartilages are destroyed the bones approximate one another so that we get narrowing. In this case the picture was taken after operation, so that the cartilage was gone.

to and directly beneath the skin wound and the knee joint was opened by retracting the two halves of the patella and the attached structures. The knee joint was found to be filled with about three ounces of straw colored fluid from which a culture was taken. The synovia of the knee joint was edematous, thickened and dark red. A pannus had grown from the edges of the cartilage over the condyles of the femur. So far as was possible the synovia of the joint was removed. The joint was closed. Continuous catgut for the deeper structures, interrupted plain for the subcutaneous tissue and continuous silk for the skin. Dry dressings and snug bandage applied.

PATHOLOGICAL REPORT

Microscopic examination of fragments of the synovia from the knee shows an abundant wandering-cell infiltration made up largely of mononuclears. There were occasional focal collections of epithelioid and giant cells.

Tuberculosis.

BACTERIOLOGICAL REPORTS

Culture from fluid aspirated from the joint was sterile.

A guinea pig was inoculated with material from the knee joint. Necropsy March 20 showed tuberculous lesions of the glands and the spleen.

PRE-OPERATIVE DIAGNOSIS FEBRUARY 21

Tuberculosis of the left knee joint.

SECOND OPERATION

The incision was excised, the patella split along the same lines that had been cut at the previous operation and the knee joint opened. A small amount of tuberculous pus was found just outside the deep fascia. This was rinsed out of the wound with ether. All of the cartilage was then removed from the upper surface of the tibia, from the lower surface of the femur and from the under surface of the two halves of the patella. The periosteum was then incised over the dorsum of the femur where the patella would rest and lifted to the sides so that the bared surfaces of the patella rested upon the freshened bone of the femur. The wound was then closed. A plaster of Paris spica was applied. The patient was sent to the ward in good condition.

PATHOLOGICAL REPORT

Fragments of cartilage and soft tissue from the knee joint showing on microscopic examination wandering cell infiltration with an occasional focal collection of epithelioid and giant cells.

Tuberculosis.

BACTERIOLOGICAL REPORT

A second guinea pig was inoculated as above. At necropsy it likewise was positive for tuberculosis.

FURTHER DISCUSSION

DR. CABOT: What were the points on which your pre-operative diagnosis rested?

DR. ALLISON: It was simply a tentative diagnosis made on the basis of excluding all other types of trouble which might cause that kind of symptom complex in the knee. I say it was tentative, because a knee such as this was at that time might easily be due to an internal derangement, might easily be due to a chronic inflammatory process of low grade, might easily rest on some perhaps neurological basis. The last suggestion however is not nearly so important as the other two.

Of the chronic inflammatory processes the one that would be most probable would be gonorrhœa. A Neisser infection will cause such a knee as this. An internal derangement will cause such a knee, judging from the physical examination, as this. She ran a little temperature, 99.2°. She had an inflammatory knee, apparently. Those weigh against internal derangements, and they were against pus infection of an acute and of a low grade type. So we thought there was most probably tuberculosis. By internal derangements I mean loose cartilages.

DR. CABOT: Internal to the joint?

DR. ALLISON: Yes. She had in her history a definite statement of tenderness over her internal semilunar cartilage. It might be that that would cause pain and disturbance such as she had, but it would not cause a rise in temperature. The other symptoms, though, would go with it.

DR. CABOT: Dr. Holmes, if you had had all these clinical facts that Dr. Allison has given could you have made a diagnosis of tuberculosis of the joint?

DR. HOLMES: I do not think I could. It would help. We have been going over a good many of the cases, and I am frank to confess that I cannot make a diagnosis of early tuberculosis. In a good many cases there is no evidence at all until the process has been going on for some time.

DR. CABOT: If we have a chronic destructive process in the knee and we can exclude an internal derangement and gonorrhœa, is it likely to be tuberculosis?

DR. ALLISON: Tuberculosis or syphilis.

DR. CABOT: Does syphilis give a picture like this?

DR. ALLISON: Yes.

A STUDENT: Does gonorrhœa give this picture?

DR. ALLISON: Yes. Very frequently one knee alone is affected. X-rays of the cases we see are like that. The multiple joint cases occur too, but those are likely to clear up. The mono-articular type is the most frequent, and great care must be taken to make a positive diagnosis.

A STUDENT: Do they have a great deal of pain?

DR. ALLISON: Pain is a non-reliable symptom in tuberculosis of the joint, but they usually have pain, and a good deal of pain.

A STUDENT: Is there any evidence of tuberculosis anywhere else in the body?

DR. ALLISON: Not so far as we could make out, but there must have been, because the joint manifestations are always secondary.

DR. CABOT: Your treatment was directed to stiffening the knee-joint. Aren't there cases where you would do an excision?

DR. ALLISON: That is practically what was done here, not so widely as to give deformity, but bone to bone after removal of the articular

cartilages. In adult knees we do that as a matter of routine practice.

DR. CABOT: Should patients like this be treated for the supposititious tuberculosis elsewhere?

DR. ALLISON: I certainly think so. But unfortunately they are not. This woman went back to her home, had another child, and took up her ordinary life.

DR. CABOT: But if the hospital did its job she would be referred to the Medical Department and sent off into the country?

DR. ALLISON: That is by far the better thing to do.

A STUDENT: How do you know it is tuberculosis?

DR. ALLISON: There are two ways to find out. One of them is the guinea pig and the fluid from the joint. The other is to remove tissue and look at it with a microscope. Positive diagnosis is necessary, and these are the only means to positive diagnosis that we have. That is why this woman's joint was opened. We did not want to destroy her knee joint without knowing positively that it was tuberculosis. So a section of her synovial membrane was removed, and with the microscope we could see evidences of tuberculosis of the synovial membrane. In ninety per cent, or perhaps an even greater number of cases it is possible to make a positive diagnosis on tissue examination.

A STUDENT: How do you rule out chronic arthritis?

DR. ALLISON: Do you mean chronic arthritis or arthritis deformans? If you are speaking of Type II, it is a diagnosis which has to be ruled out just as we have here. We have found a positive etiological factor. We should not find that in Type II.

A STUDENT: How did you rule it out in the pre-operative diagnosis?

DR. ALLISON: We could not rule it out. We cannot rule out acute infections either. We could only make a tentative pre-operative diagnosis, and I believe that is the proper way to look at these joint lesions.

DR. CABOT: That is, it was really an exploratory operation?

A STUDENT: What is the effect of the operation for fixation?

DR. ALLISON: In the joint the whole synovial membrane was full of the tuberculosis. The knee-joint is the largest of our joints and has the most synovial area. By taking off the cartilage and letting her two bone surfaces come together the knee heals up by bony union and

tuberculous tissue disappears in these joints after a time.

DR. CABOT: Would you say that healing takes place there as perhaps it does in the lungs, by rest? We put the lungs at rest, you put the knee at rest.

DR. ALLISON: Absolutely. We deprive it of function.

A STUDENT: What would you have done if this had been a child?

DR. ALLISON: That brings up a controversy. I must say that ideal treatment would include proper heliotherapy, life in the country and proper care. I would not do this in a young child, and perhaps that is the only stand to take, that these other things must be done and a destructive operation ought not to be done. But unfortunately children treated in out-patient clinics at the Children's Hospital and here, kept in their homes and at school, grow to adult life still carrying a tuberculous knee. We have records of cases of from twelve to twenty-one years' duration. What is the outcome? They have a stiffened knee. They have lost all these years carrying tuberculosis and being crippled. It is not ideal treatment, but it is perhaps necessary, to ankylose these tuberculous knees early. The ideal thing would be to put children in sunshine with proper rest and food. The fundamental trouble is in treating tuberculosis as a local disease, which it is not. Tuberculosis of the knee is not a local disease, it is tuberculosis. We have tried for years to treat tuberculosis locally without success.

DR. CABOT: And there is no question that under ideal conditions we could cure some of these conditions in children without operation?

DR. ALLISON: Yes, that has been definitely proved.

A STUDENT: Had you the report from the guinea pig before the operation was done?

DR. ALLISON: No. We had a positive section of tissue and as I have said that is enough. We should have had to wait four to six weeks for the guinea pig report. The section is just as good.

Since this time the patient has had one more child, and so far as I can learn she is perfectly well.

DIAGNOSIS

Tuberculosis of the left knee joint.

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AN INJUSTICE TO PROFESSIONAL SERVANTS OF THE COMMONWEALTH

Two bills, Senate 114 and 253, have been introduced in the Massachusetts Legislature designed to restrict the activities of full time employees of the State entirely to the work to which such persons have been appointed. This means that even professional employees of the State may not enter upon any gainful occupations outside the service. Whether this is aimed at any one official or is merely a general rule designed to secure more valuable service is not generally known.

The daily papers have suggested the possibility of a political complexion to the measure or the opportunity to harass a political enemy. With these features we are not concerned. We do, however, see in a law of this sort the likelihood of harm to the State and injustice to individuals. Doctors, engineers, or other professional servants will never feel any great amount of loyalty to the state which seeks to tie them down to fixed hours of service or the prevention of activities which might broaden an understanding of the problems of their work. Even among teachers in clinical departments of medical schools, the opportunities for consultations are quite generally regarded as beneficial, for

in this way one continues to be in touch with the questions met by general practitioners. In state service, too, the opportunities for consultations may be of advantage to the state and the consultant by reason of broader understanding of the affairs of the world outside the institution where one may be at work. We believe that the expert in mental diseases or the scientific manager of certain technical departments may with perfect propriety testify in courts or give advice to individuals or institutions and receive a fee for so doing.

The dissemination of the knowledge because of which the person has been chosen by the state would be of advantage to all concerned. We recall the conditions under which an eminent public health official accepted a position in New York State. He claimed the right to act as consultant according to his own wishes, and we have never heard of any reason to criticise the administration of his office.

If the State decides to put its professional servants on a time clock or other restrictive basis, we shall be surprised if the best talent will be available in the future. If a doctor, for example, is big enough for the job in hand, the State need never worry about his hours or his consultation fees. The way to secure the best professional service is to pay adequate salaries and give the administrator a free hand. If he proves to be a graftor, he would have been equally so under the restrictive system.

POSSIBLE MISINTERPRETATION OF ARGUMENTS SUBMITTED BY DOCTORS

In a recent letter to the *New York Times* Dr. Robert T. Morris makes a strong appeal for the defeat of the Chiropractic Bill now pending in New York.

In his argument for better medical training he quotes the statement made by Dr. Richard Cabot in which the errors of diagnosis revealed by autopsies are set forth. Although Dr. Cabot learned that fifty per cent. of the cases studied by autopsy demonstrated faulty diagnoses these figures, we contend, should not be quoted alone and if quoted at all should be so modified that a proper understanding of conditions would result. An untrained person with little intellectual development might be excused if after seeing this statement interpreted the report to mean that the diagnoses of fifty per cent. of cases seen by physicians are not correct. If it is possible for anyone to infer that this is true, great care should be exercised when using these statistics, for they apply to cases dying in hospitals and it should be explained that hospitals admit a large proportion of the most serious and complicated cases because they present problems that need unusual study. One might with equal reason argue that because the mortality rate is high in hospitals and in some

diseases in the practice of the most expert surgeons, that patients should not be sent to hospitals when autopsies show errors or to surgeons who fail to cure certain advanced cases of cancer for example. Would it not be fairer, if one must use such statistics, to also tell of the greater number of cases where diseases were correctly diagnosed and cured.

The public should be led to know that the great majority of illnesses can be recognized by well educated doctors and appropriate treatments given. There is a very general impression that eighty per cent. or more of our patients recover and some contend that the average is somewhat better.

We are fearful that arguments based on Dr. Cabot's statistics if employed to defeat a chiropractic bill may be so used as to create a very wrong impression. Lawyers can take a part of a statement and make it serve to support a contention quite out of harmony with the original meaning. It is quite evident that it is easy to prejudice many people with respect to doctors and medicine. Almost every legislative hearing relating to bills concerning medical education brings forward evidence of this sort.

Our statements should be simple, direct and devoid of confusing illustrations. To medical men Dr. Morris' arguments are sound, but unfortunately lawmakers are not qualified to draw correct conclusions from statistics relating to diseases and the efficiency of medicine.

THE PREVALENCE OF CRIME

COLLIS GRAHAM of the National Surety Co. in a speech recently delivered in Boston is reported to have said that there have been 85,000 murders in the United States during the last ten years and there are now 135,000 murderers alive and moving freely about the country today, also that there are more than 300,000 persons in the United States subsisting by crime alone. He predicted that several thousand murders will be committed during the coming year.

The economic loss due to crime runs into untold millions. We are amazed at the daily records of crime in the papers but we seem to regard this distressing burden in a comparatively carefree attitude until we or someone in our circle of acquaintances is definitely confronted with the facts or finds that his pocket has been picked or his house rifled. The quite common sentiment seems to be that our legal machinery is unable to compete with the criminal at least in a preventive way. It may be that tender-hearted people exist in sufficient numbers to create the impression that the captured criminal is an object of pity and the victim of circumstances. It is quite certain that society is not sufficiently well organized to meet the chal-

lenge of the murderer or thief effectually. So many recommendations have been submitted that, like remedies for a given disease, the number and variety are evidences that the best methods have not been evolved. Perhaps an island set apart for those who have adopted a criminal life could be prepared for the accommodation of those people who, having shown disregard of laws, might be left to work out their own salvation in a lawless community.

It would certainly be a living and striking example of the conception of a hell. If that theological belief which teaches the existence of a hell is true, these people might be given an object lesson in advance. If such a scheme should be adopted, decent people would be relieved of a considerable burden. Carrying the idea a little further, an island for men and another for women accommodating these classes would result in preventing the imposition of a portion of subsequent criminal generations on society.

A great proportion of criminals never reform and when released from custody play the game over again. This plan would relieve a sheriff who is a conscientious objector from all responsibility with respect to executions. The deported criminals would supply the demand for executioners. They might even revert to cannibalism and make the picture even more horrible. But seriously, society is entitled to more and better protection than we now have.

Who will be the Moses who can lead us out of the bondage of crime and the task of supporting the criminal population?

A PROTEST AGAINST SMOKE

AT a meeting of the Trudeau Society in Boston, a resolution recommended by a committee appointed by the President of the Society was adopted regarding the deleterious effect of the excessive use of soft coal and oil in our crowded cities. The resolution reads as follows:

"A record of protest: That the Trudeau Medical Society of Boston believes that the present smoke nuisance is to a large degree avoidable, and is due to unintelligent and uneconomical use of bituminous coal, oil, and the improper adjustment of carburetors and use of oil in automobiles, which may and could be abated to a large degree.

"That the present education and medical instruction for the use of fresh air as a health measure is to a great degree offset by these needless nuisances, and that the enforcement of existing laws by the proper officials, and instructions in methods of firing soft coals, will eliminate to a very large percentage the present nuisance. That on the return of the general use of anthracite coal, its use should be encouraged for the health and comfort of the community."

THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

O'HARA, DWIGHT, B.S.; M.D. Harvard Medical School 1919; Visiting Physician, Waltham Hospital; Junior Visiting Physician, Boston City Hospital; Lecturer in Therapeutics, Boston University School of Medicine. His subject is "Three Months on a Medical Service," page 337.

RICHARDSON, WYMAN, A.B.; M.D. Harvard Medical School 1923; Assistant in Medicine, Massachusetts General Hospital. His subject is "Spontaneous Subarachnoid Hemorrhage," page 340.

JORESS, MARK H., M.D. Tufts College Medical School 1920; Member, National Tuberculosis Association and the Eastern Section of the National Sanatorium Association; Assistant Physician, Rutland State Sanatorium. His subject is "The Value of the History in Tuberculosis," page 344.

CHAMBERLIN, H. A., M.D. Tufts College Medical School. His subject is "Report of a Case of Urethral Calculus in a Child," page 347.

LEGISLATIVE NOTES

ARGUMENTS IN FAVOR OF EXTENDING
LEGAL REQUIREMENTS FOR VACCINATION*

BY S. B. WOODWARD, M.D.

MEMBERS OF THE JOINT COMMITTEE ON PUBLIC
HEALTH OF THE MASSACHUSETTS LEGISLATURE.
Gentlemen:

My only excuse for coming before you once again with the same proposition that received but scant support from you last year is a sense of duty, a feeling that I should spare no efforts to bring to your attention any facts at my disposal which may induce you to reverse your judgment and report favorably my bill to extend our vaccination laws so that they shall be consistent, so that the children in the private and parochial schools may have the same protection now given to those in schools supported by the public taxes.

Let no one believe for a single moment that smallpox is becoming a rare or an unknown disease. Let no one think for a single moment that it is not often fatal. Let no one think that its fatalities are growing less or that the disease is dying out.

Says the Surgeon General of the United States Public Health Service in his report for the year ending June 30, 1925: "Incomplete re-

ports from 62 countries included 218,000 cases of smallpox and more than 50,000 deaths during the calendar year 1924. The same countries reported 165,000 cases and more than 45,000 deaths during 1923. Thirty-five states of the Union in 1924 showed an increase of 75% in the number of cases and 628% in the number of deaths as compared with the year 1923. The smallpox case rate in the United States is at present, according to reports received, the highest of any civilized country in the world. Much of the disease is, it is true, of a mild type with a low death rate but more and more epidemics of the severe type with high death rates are appearing", and this despite the bulwark built up by those who, having acquired and weathered a mild attack, are therefore immune to further infection.

It is not my intention to waste time in discussing the value of vaccination as a preventive, and a modifier of smallpox. Any study of any epidemic in any country in the whole world; any study of the result of the introduction of vaccination in a previously pest-ridden country; any study of an outbreak at any time and any where will convince, I should suppose, any reasoning being that vaccination and vaccination only will suppress, modify and prevent smallpox.

All persons connected with the Willard Parker Smallpox Hospital in the City of New York are vaccinated twice yearly. No attendant has ever been infected, constantly exposed as they are.

Millions of persons have, refusing or neglecting vaccination, died of the disease smallpox in the 130 years since Jenner's discovery. I defy any anti-vaccinationist to present any statistics of any epidemic of recent times which does not show that the vast proportion of those affected and an even larger proportion of those who die are unvaccinated individuals and by large proportion I do not mean 20% or 25% but 80% or 90% and more. Whenever smallpox does appear the anti-vaccinationists are usually conspicuous by their absence and are only too willing to leave their unvaccinated brethren, whom they have led into the valley of disfigurement and death, to be cared for by those who believe in vaccination. No matter how serious conditions become as a result of neglect, proper enforcement of vaccination will quickly bring about normal conditions. This was conspicuously shown in the Philippines, pest-ridden under Spanish rule, with some 40,000 smallpox deaths a year. Controlled under our military administration; no smallpox reported for several years. Then, as the anti-vaccinationists would have us do here, vaccination neglected as unnecessary, with a horde of unvaccinated children allowed to grow up, food not for powder but for smallpox, until in 1918 there were 16,567 deaths and in 1919 49,971. How virulent small-

*Delivered before the Legislative Committee on Public Health of the State of Massachusetts, February 24, 1925.

pox can be was shown there for in 1918 there were 47,369 cases and in 1919 65,180 which gives a death rate of 33% in the one year and 68% in the other. Dr. Leonard Wood came on the scene as Governor General at this time, vigorous vaccination was inaugurated; there were 7,105 deaths in 1920, 726 deaths in 1921, 19 deaths in 1922, 3 deaths in 1923 and in 1924 17 cases, (cases not deaths,) throughout the archipelago. Porto Rico thoroughly vaccinated soon after we took it from Spain, a pest-hold before that time, had in 11 years but 137 cases of smallpox. Ohio having during the same time 51,913. Every man, woman and child in Porto Rico so far as they could be found were vaccinated by our army surgeons and education is compulsory now and no child goes to school unvaccinated. Anti-vaccinationists are quite active in Ohio, in Porto Rico they are not conspicuous.

See what is happening in Canada and the United States. In the eleven years 1913-1923 we had 579,618 reported cases of smallpox; how many more not reported neither I nor anybody else knows. In the first six months of 1923 in 643 cities there were 6,052 cases and 55 deaths. In the same six months in 1924 18,103 cases and 268 deaths, and in 1925 12,306 cases and 431 deaths, 430 of them in the United States. (*Statistical Bulletin* of the Metropolitan Life Insurance Company.)

Why is it that we are content to have the following data from the Epidemiological Intelligence of the League of Nations strike us in the face?

SMALLPOX PREVALENCE

1919 U. S.	55,089 cases	England	294	Germany	5,012
1920 " "	91,565	"	263	"	2,042
1921 " "	91,611	"	315	"	688
1922 " "	28,126	"	973	"	215
1923 " "	53,921	"	2,485	"	17

In 5 years Germany, before the World War the most thoroughly vaccinated country in the world, despite the political upheaval and disorganization was able to return to prewar conditions, while we have as many thousand cases in 1923 as we had ten years before. We should be proud of ourselves—I don't think.

We in Massachusetts in common with the inhabitants of New Hampshire, Rhode Island and the cities of New York with populations of 50,000 or more have school vaccination which to all intents and purposes few other states in the Union have, Porto Rico, not a state, excepted, and it is well for us that it is so for these identical states show not only man for man but almost absolutely less smallpox than any other states in the Union bar none; and not only that but Rhode Island and the New York cities have the law which I am calling for here; the law which puts the private school child in the same class as the one attending the public school.

Rhode Island passed this law last year, the first year it was presented to its legislators; New York has had it for a long time, and it is in that state so drastic that in the cities affected not only the attending pupil but also the teacher, janitor, scrub woman or other person employed about a building housing a school, public or private, must produce proof that he or she has been successfully vaccinated before he or she can in the one case attend school as a pupil, in the other, receive appointment to the positions specified above.

The State of New York is now my theme. Let us compare the cities of 50,000 and over to which alone this law applies with the rest of the state not living under it. I have here statements from each of these larger cities and a general statement from the State Commissioner of Health. In the eleven years 1913-1923 there were in the whole State 4,469 cases of smallpox. The population of New York is 10,385,227 (census of 1920) 7,199,899 live in cities which come under the law; namely, Albany, Binghamton, Brooklyn, Buffalo, Hemstead, New York, Queens, and the Bronx, Richmond Borough, Rochester, Schenectady, Syracuse, Troy, Utica and Yonkers. Three million one hundred eighty-five thousand three hundred and twenty-eight living elsewhere do not come under the school law. What proportion of the 4,469 cases of smallpox came from the 7,000,000 in the cities? Just 668 cases, while the 3,000,000 in the smaller cities, towns and villages had 3,801, just 6 times as many for less than half the population. And Niagara Falls which reached its 50,000 population toward the end of this period and never came under the law had 715 of these 3,801 cases, thus destroying any argument that there is less smallpox in cities anyway than in the country. As a matter of fact, the American Medical Liberty League argues just the other way, claiming that there is more in the cities because vaccination keeps smallpox alive and the health authorities are more vigilant there than in the more sparsely settled communities.

Please get the idea out of your heads that this asking for the same law in Massachusetts which has proved so valuable in the larger cities of New York, that despite the influx of people in and out of New York City less than 200 cases appeared there in the eleven years under discussion and no person has died of smallpox since 1914, get the idea out of your heads, that I am standing alone in this asking and pay no attention to anyone who tells you that I do not care whether you report this bill or not provided you give the bill repealing our present law leave to withdraw. I am in deadly earnest. I was never more in earnest about anything in my life and I have with me and behind me just as earnest supporters of my appeal. First, The State Board of Health, second, the physicians of the State. Dr. Padelford and Dr. Graves will

say no, but I tell you that while they belong to the Homeopathic Medical Society its 400 members are practically unanimously in favor of my bill and its President is here today to support it. The Massachusetts Medical Society supports it, so far as I know, unanimously, with its 4,255 members. The business interests of the State represented by Chambers of Commerce support it. I have here the proofs in letters from the Chambers of Commerce of New Bedford, Athol, Springfield, Lawrence, Winchendon, Beverly, Lynn, Great Barrington, Waltham, Holyoke, Newburyport, Gloucester and Worcester, thirteen in all. I have also Boston but I understand Boston will speak for herself at this hearing. I have behind me the Massachusetts Association of Boards of Health of course, a vote of the City Government of Worcester, a letter from James M. Curley written when he was Mayor of Boston, from Roger Wolcott and B. Loring Young, ex-speaker of the House of Representatives. I have the support of the Metropolitan Life Insurance Company, the State Mutual Life, the Boston Mutual Life, the Berkshire Life and the Columbian National Life. I could bring to you letters from every life insurance company taking business in Massachusetts would I expend the time and the effort needed to obtain them, and lastly and most important of all I have the support of the very institutions that will be most affected by the passage of this bill, the colleges and boarding schools of the State. Do those who have the control of the parochial schools with their estimated membership of no less than 100,000 oppose me and my bill? Most decidedly not, as in due time I will show you. Here are letters of approval of the measure from the Principals of the State Normal Schools of Hyannis, Bridgewater, Worcester, North Adams and Westfield, from those of Westford, Milton, Phillips, Worcester and Bradford Academies, from the heads of the Textile Schools of Lowell and New Bedford, from Northfield Seminary and Lasell Seminary, from Walnut Hill School in Natick where they had smallpox and did not like it, from the Presidents of Amherst, Tufts, Radcliffe, Massachusetts Agricultural, Smith, Simmons, Williams, Worcester Polytechnic, Mount Holyoke, Holy Cross, Boston University, Assumption, Massachusetts Institute of Technology, Wheaton, Clark University and Clark College, Wellesley and Harvard. (If there be other colleges and universities in the State, I do not know them.) And lastly lest I tire your patience, letters from Bishop O'Leary of Springfield, Bishop Feehan of Fall River and Cardinal O'Connell, Archbishop of Boston, as well as one from the late Bishop Beavan of Springfield. These letters from the Princes of the Catholic Church are short and I would like to read them.

"I have received yours of the 14th inst. and beg leave to say that I have no objection to legitimate

measures being taken, by which the vaccination of children should be extended to the parochial schools under my jurisdiction."

Very sincerely yours,
THOMAS M. O'LEARY,
Bishop of Springfield.

"I am directed by Bishop Feehan to acknowledge your letter of the 4th inst., relative to legislation on vaccination, and to say in reply that relying upon medical testimony he is of the opinion that it would be for the protection of the majority, if private schools were included in the law. As health measure he certainly has no objection to its extension to the parochial schools under his jurisdiction."

Very sincerely yours,
(Rev.) EDWARD J. CARR.

"I have received your communication of May 9th, and I wish to say that I see no objection to legitimate measures being taken by which the vaccination of children should be made general."

Very sincerely yours,
WILLIAM CARD O'CONNELL,
Archbishop of Boston.

And now, gentlemen, I have finished. For ten consecutive years this bill has come before you. It is urged by all health authorities in the State, it is desired by the private schools that will be affected by its provisions, it is in the interest of public health and I claim that the bill should be reported and passed by the Legislature as submitted. I have been told that it takes five years for a bill, however desirable, to become a law. This has been before this Committee for ten. I am personally growing old but I warn you that I shall continue to come before you until you give me surcease of sorrow, my legs fail to carry me, or my voice dies in my throat. Pray God I may not live to see this State brought down to the condition now consented to, expected and ignored by California with, in eleven years its 19,000 cases, Washington with 24,000, Michigan with 26,000, Wisconsin, Kansas and Iowa with 29,000 each, Minnesota with 35,000, Illinois with 36,000, Indiana with 40,000, Ohio with 51,913. We are no different from the people in these states, nor are we more sanitary. We had but 3 cases of smallpox in 1925 but it will not always be thus if we allow the continual increase among the unvaccinated children to continue as it is continuing and will continue under present conditions.

HOUSE BILL 708

The bill introduced by those who would like to have a Board of Chiropractic Examiners with power to license this form of practice has been given leave to withdraw. We congratulate the legislature on this decision. It is probable that the work of the Legislative Committee of the Massachusetts Medical Society and the Massachusetts Homeopathic Medical Society together with the support given by the physicians at large has had an effect. It seems to be evi-

dent that more efforts are being made to inform the public of the reasons for the maintenance of a single standard.

Now if the bill sponsored by the Joint Legislative Committee which provides for a study of the medical schools is fully explained, the people will convince the legislature of the wisdom of this measure.

MISCELLANY

HAVE YOU PAID YOUR ANNUAL DUES?

EVERY year some Fellows of the Massachusetts Medical Society are annoyed because the JOURNAL is not received owing to failure to pay the annual dues. It is not surprising that the complexities of life often cause the postponement of detailed matter of business obligations until attention is again called to an unpaid account. We do not wish to annoy busy doctors, but we are obliged to conform to the regulations adopted by the Council and must revise the mailing list after March first. If you haven't paid we must take your name from the list.

NEWS RELEASE ISSUED BY NEW ENGLAND CONFERENCE ON TUBERCULOSIS

THE New England Conference on Tuberculosis, of which Walter D. Thurber of Augusta, Maine, is President and Frank Kiernan of Boston, Massachusetts, is Secretary, has just received from the U. S. Census Bureau a report on the tuberculosis mortality throughout the United States in 1924. The figures indicate that remarkable progress is being made in the fight on tuberculosis in New England States.

Every state in the New England area reports a tuberculosis death rate for 1924, which is considerably lower than the rate for the entire United States. The past five years have witnessed a steady and rapid decline in the New England death rate from this disease which a few years ago was hailed fearfully as "Captain of the Men of Death."

In 1920 the tuberculosis deaths in New England were at the rate of 107.8 per 100,000 population as compared with 114.2 for the entire United States registration area.

In 1924 New England had cut its rate to 79.4 while the average for the United States had been reduced to 90.6.

Five years ago the New England death rate from tuberculosis or consumption was only 6.4 below the United States average. The 1924 New England rate was 11.2 below the average for the entire nation.

Maine has led not only New England but all the other states east of the Mississippi River and South of the Great Lakes in this noteworthy victory against tuberculosis. The

table of figures for the New England States announced today by Secretary Kiernan of the New England Conference is as follows:

State	Tuberculosis death rate for 1924	Tuberculosis death rate for 1920
Maine	68.3	103.8
New Hampshire	74.2	97
Vermont	81.4	81.8
Connecticut	81.8	119.4
Rhode Island	84.9	131.3
Massachusetts	86.2	113.8

The average death rate for New England from tuberculosis for the year 1920 was 107.8. In five years the rate was reduced to 79.4.

"These figures mean much for New England," said Secretary Kiernan. "For one thing, it means that in the six New England states there are now living approximately 1,700 men, women and children who would have been killed by tuberculosis if the 1920 rate had not been checked. This saving of lives never can be measured in dollars and cents because no one can measure happiness by any human yard-stick. The amount of happiness which has been brought into New England and the amount of misery and suffering which has been prevented in this winning fight for health is beyond mortal comprehension."

"But if we should take the modest figure of \$5,000 per life merely for comparison we find that the stupendous saving to New England in five short years from this successful fight on a single disease has amounted to \$8,500,000."

"Another thing which should not be overlooked is that New England is rapidly becoming in reality the 'playground of the nation.' The New England Conference on Tuberculosis is helping to make this section of the country more desirable as a place in which to live and work and play. Our allied and affiliated organizations, our splendid state and local health departments, our public spirited men and women who are giving freely of their time and money, our broad gauged physicians who are working hand-in-hand with both the official and voluntary health agencies—all these are rapidly making of New England a center where there is a minimum amount of risk from communicable diseases both to our own people and to the visitors who come to us for rest, recreation or business."

"We are proud of the fact that one state in our group—Maine—is leading the entire eastern half of the United States in its low tuberculosis mortality. The other five New England states are not far behind. In other phases and forms of health work, New England is making a creditable showing. This showing is due to the public spirit which prompts generous givers to liberally support the work—both voluntary and official—and to the vast amount of

service which is given every week in the year by public spirited men and women throughout the New England area."

REPORT OF BOSTON HEALTH DEPARTMENT

BULLETIN No. 1, Vol. 15, of the Boston Health Department summarizes statistical data for 1925 and presents a resumé of some of the activities and accomplishments of the year. The total number of deaths reported shows an increase of 657 over last year, there having been 11,590 in 1925 against 10,933 for 1924. This gives a rate per 1,000 population of 14.80 against 14.07 for the previous year. The population of the city in 1925 was 783,166. Seventeen per cent. of the deaths reported are of nonresidents.

The number of infant deaths under one year of age was 1,583, an increase of 111 over the previous year. This is further accentuated by the fact that the number of births was 18,450, a decrease of 1,326 over 1924. The birth rate for 1925 was 23.56, the lowest ever recorded in Boston, and the infant mortality rate 85.80 as against 74.43 for 1924, 82.49 for 1923, and 92.7 for 1922.

The death rate ascribed to puerperal causes has been steadily decreasing. The number of persons dying over sixty years of age shows a marked increase over previous years. With the exception of pulmonary tuberculosis and diphtheria, the deaths from communicable diseases were in excess of the previous year, all of these diseases except anterior poliomyelitis showing also an increase in the number of cases. The deaths from diphtheria were 99 against 168 for 124, both the rate and the total number being less than in any year in the history of the city. Widespread immunization against the disease must be held responsible for this decrease.

In the health service survey carried on by the United States Public Health Association co-operating with the United States Public Health Service, Boston scored a total of 907 out of a possible 1,000 points, a total not exceeded by any city in the country. An intensive study has been made into the duration of the contagiousness and the treatment of whooping cough. The results of which will probably be published in 1926.

RECENT DEATHS

CLASS—DR. FRANKLIN MORRIS CLASS of New York, a specialist in the treatment of tuberculosis, died February 12, 1926, in the Presbyterian Hospital, of acidosis, after an illness of three weeks. He was 44 years old, the only son of Mary E. and the late Franklin M. Class.

Dr. Class was also a composer of vocal and instrumental music. While at Harvard, as a member of

the class of 1903, he composed the music for the Hasty Pudding Club show in his senior year. He was one of the earliest members of the McDowell Club. He also belonged to the Bohemians, Harvard Club and the Harvey Society. After receiving his academic degree at Harvard he studied medicine at the College of Physicians and Surgeons in New York, graduating in 1907. He gained his hospital training at St. Luke's Hospital. At the time of his death he was in charge of the tuberculosis work at the Vanderbilt Clinic.

MILLIKEN—DR. WILLIAM HARDY MILLIKEN of Roxbury died suddenly at his home, February 17, 1926, aged 68.

He was a graduate of Bowdoin Medical School in 1880 and practised in Franklin, Mass., but gave up practice 31 years ago to represent the E. H. Phillips Company of New York. He is survived by his widow, who was May Dickinson; by a son, Dr. Samuel A. Milliken of the United States Marine Corps, and by a daughter. Dr. Milliken was a Mason.

DUTTON—DR. CHARLES DUTTON of Wakefield died at his home in that town, February 16, 1926, at the age of 86. He was one of the oldest members of the Massachusetts Medical Society, having joined it from Tyngsboro in 1867.

He was born in North Acton, the son of Solomon L. and Olive C. (Hutchinson) Dutton and was graduated from the Harvard Medical School in the class of 1863. During and after his student days he made a special study of mental diseases and for five years he was on the staff of the New Hampshire Insane Asylum and the Illinois State Hospital for the Insane. In 1868 he resigned from the Illinois post and took a post-graduate course in New York City and began general practice in Tyngsboro, where he became a member of the school committee of the town, superintendent of schools and a trustee of the public library. He was surgeon of the old Sixth Massachusetts Regiment before the Spanish War, twice he was president of the Middlesex North District Medical Society, and had been treasurer of the Middlesex East Medical Society for 20 years, having been succeeded in 1916 by his son, Dr. Richard Dutton of Wakefield. The following year he retired from active practice.

Dr. Dutton was a member of Golden Rule Lodge of Masons and of the First Baptist Church in Wakefield.

He was married three times. His last wife, who survives him, was Mary L. Mansfield, daughter of Dr. Joseph D. Mansfield of Wakefield.

GILMAN—DR. WILLIAM HENRY GILMAN, a Fellow of the Massachusetts Medical Society, died at his home in Cambridge, January 2, 1926, of pneumonia, aged 29 years.

He was born in Cambridge, September 17, 1895, the son of Dr. Francis M. Gilman of that city. He was graduated from the Cambridge High and Latin School, from Tufts College Medical School, took his M.D. in 1919, and following a year's training at the Cambridge Hospital started in to practice with his father. Before his practice made it impossible for him to attend to the duties of the office, Dr. Gilman was scout master at the Grace Methodist Church of Boy Scouts. Up to the time of his death he was a Lieutenant in the State Guard Medical Corps. He was a member of the American Medical Association.

Dr. Gilman is survived by his widow, who was Miss Ethel L. Rice, and by a son, Francis M. Gilman.

CORRESPONDENCE

A REPLY TO THE QUESTIONS SUBMITTED IN
THE ISSUE OF FEBRUARY 4, 1926

270 Commonwealth Avenue, Boston, Mass.
February 9, 1926.

Editor, Boston Medical and Surgical Journal:

In reply to the letter of H. B. Levine concerning the etiology of the pain in angina pectoris (BOSTON MED. AND SURG. JOURN., Feb. 4, 1926).

The original paper on The Mechanism of Angina Pectoris (*Arch. Int. Med.*, 34:137, Aug., 1924) goes into much greater detail and discusses some of the very points which Dr. Levine, if I understand him correctly, believes I have overlooked. In both this and the last paper it is directly asserted that angina pectoris "is most commonly associated with three types of heart disease, namely, arteriosclerotic heart disease,* cardiovascular syphilis (and occasionally in other infections of the heart), and hypertensive heart disease." In the latter only is hypertension a feature.

I would draw attention to the third and second last pages of the original paper for a discussion of the blood pressure levels recorded during actual attacks. An elevation in the peripheral blood pressure, which alone can be recorded by our clinical methods, is not always observed. However, careful consideration of the data pertaining to blood pressure does not exclude the possibility of a sudden rise in the level of the pressure in the central part of the circulation, i. e., in the first part of the aorta and in the left ventricle.

On page 188 of my book, *The Heart in Modern Practice*, it is mentioned that an attack of angina pectoris may rouse the victim from sleep. It is also stated that anginal seizures are "characterized by a close connection with exercise, physical or mental." In the latter there is, of course, no outward evidence of motion and yet the blood pressure is known to rise. On this point one may refer to the well-known report of E. Weber (*Archiv. f. Physiol.*, 1907, p. 300), who found that certain emotions, or the thought of taking exercise (not followed by actual movement), led to shrinkage of the abdominal viscera and to expansion of the limbs. "The rise of arterial pressure and altered distribution of the blood in the body, consequent upon constriction of the splanchnic vessels," etc. (Here I quote the words of the late F. A. Bainbridge, *Physiology of Muscular Exercise*, 2nd edit., p. 95, 1923, commenting on Weber's observations.) The subject needs fuller discussion to be convincing but consideration of space forbids.

I am aware, of course, of the separation by Vaquez of angina pectoris into two types: angina of effort, and angina of debilitus—but this classification is not, I believe, generally accepted. According to the present state of our knowledge I feel this to be an artificial grouping and prefer to consider all cases to be angina pectoris without essential difference in the mechanism thereof.

The conception of the sudden change of pressure in and near the heart is, as will be readily seen, largely a restatement of Albutt's aortic theory of angina pectoris, which has gained a strong body of adherents. It is a pleasure to state that I have in my file a letter from Professor Wenckebach, of Vienna, cordially approving of my original paper on the mechanism of angina pectoris.

I am glad that Doctor Levine gave expression to his objections as it has enabled me, perhaps, to answer to some extent the doubts that others must entertain.

Very truly yours,
WILLIAM D. REID.

*See heart of old age.

CONNECTICUT DEPARTMENT OF HEALTH

MORBIDITY REPORT FOR THE WEEK ENDING
FEBRUARY 13, 1926

Diphtheria	41	Conjunctivitis inf.	1
Last week	51	Encephalitis epid.	1
Diphtheria bacilli carriers	3	German measles	10
Whooping cough	68	Influenza	9
Last week	71	Pneumonia, lobar	55
Scarlet fever	78	Septic sore throat	1
Last week	90	Tuberculosis, pulmo-	
Typhoid fever	3	nary	16
Last week	5	Tuberculosis, other	
Measles	545	forms	2
Last week	714	Gonorrhea	13
Bronchopneumonia	24	Syphilis	9
Chickenpox	140		

MASSACHUSETTS DEPARTMENT OF PUBLIC
HEALTHRESUME OF COMMUNICABLE DISEASES
DURING JANUARY, 1926

GENERAL PREVALENCE

The common communicable diseases which showed an increase over last month were: Chickenpox, German measles, measles, mumps, scarlet fever and whooping cough.

	Jan., 1926	Dec., 1925	Jan., 1925
Chickenpox	1,145	1,108	1,394
German measles	251	164	589
Measles	6,573	5,583	1,321
Mumps	343	197	422
Scarlet fever	1,289	988	1,684
Whooping cough	1,633	1,063	529

RARE DISEASES

Anterior poliomyelitis was reported from Lowell, 1; Middleboro, 1; Newton, 3; Peabody, 1; total, 6.

Dog-bite requiring anti-rabic treatment was reported from Amherst, 1; Auburn, 1; Beverly, 1; Boston, 1; Deerfield, 1; Everett, 1; Lowell, 7; North Attleboro, 1; Revere, 1; Westport, 1; Winchester, 1; total, 17.

Encephalitis lethargica was reported from Brockton, 1; Mansfield, 1; Southbridge, 1; Wrentham, 1; Worcester, 2; total, 6.

Epidemic cerebrospinal meningitis was reported from Boston, 7; Everett, 1; Fall River, 1; Lawrence, 1; Medford, 1; Newburyport, 1; Northampton, 1; Quincy, 1; Springfield, 1; Swampscott, 1; Worcester, 1; total, 17.

Hookworm was reported from Boston, 3.

Malaria was reported from Cohasset, 1.

Pellagra was reported from Worcester, 1.

Septic sore throat was reported from Boston, 8; Greenfield, 1; Haverhill, 1; Lowell, 1; total, 11.

Tetanus was reported from Auburn, 1.

Trachoma was reported from Beverly, 1; Boston, 5;

Dedham, 1; Lawrence, 1; total, 8.

Trichinosis was reported from Westboro, 1.

DISTRIBUTION

All Communicable Diseases

	Jan., 1926	Jan., 1925
Total cases (all causes)	13,896	8,872
Case rate per 100,000 population	329.8	213.4

<i>Certain Prevalent Diseases</i>		Jan., 1926	Jan., 1925
<i>Diphtheria</i>		1926	1925
Total cases	391	578	
Case rate per 100,000 population	9.3	13.9	
<i>Measles</i>		Jan., 1926	Jan., 1925
Total cases	6,573	1,321	
Case rate per 100,000 population	156.0	31.8	

Cities and towns noticeably exceeding their median endemic indexes*:

Fall River	(4)	539	Somerville	(33)	132
Mansfield	(1)	19	Waltham	(3)	71
Somerset	(0)	62	Watertown	(5)	52
Westport	(0)	16	Westford	(0)	61
Bellingham	(0)	30	Weston	(0)	16
Boston	(337)	699	Auburn	(0)	65
Brockton	(5)	217	Clinton	(0)	96
Cambridge	(48)	153	Fitchburg	(1)	54
Medfield	(0)	56	Holbrook	(0)	17
Newton	(32)	246	Lancaster	(0)	29
Randolph	(0)	21	Leominster	(2)	300
Wellesley	(1)	115	Millbury	(0)	37
Everett	(10)	110	Northbridge	(0)	107
Ipswich	(0)	40	Spencer	(0)	23
Lynn	(17)	265	Templeton	(0)	38
Malden	(5)	186	Upton	(0)	33
Peabody	(2)	92	W. Boylston	(0)	74
Salem	(5)	103	Westboro	(0)	52
Saugus	(0)	54	Winchendon	(0)	10
Swampscott	(0)	38	Worcester	(16)	722
Beverly	(2)	63	Palmer	(1)	45
Billerica	(2)	47	Springfield	(27)	203
Chelmsford	(1)	36	North Adams	(0)	30
Lowell	(14)	143	Williamstown	(0)	39
Medford	(24)	92			

	Jan., 1926	Jan., 1925
<i>Scarlet Fever</i>		
Total cases	1,289	1,684

Case rate per 100,000 population 30.6 40.5

Cities and towns noticeably exceeding their median endemic indexes*:

New Bedford	(18)	36	Chelmsford	(0)	16
Everett	(16)	93	Lowell	(28)	69
Lynn	(31)	67			

	Jan., 1926	Jan., 1925
<i>Tuberculosis, Pulmonary</i>		
Total cases	489	467

Case rate per 100,000 population 11.6 11.2

	Jan., 1926	Jan., 1925
<i>Tuberculosis, Other Forms</i>		
Total cases	62	79

Case rate per 100,000 population 1.5 1.9

	Jan., 1926	Jan., 1925
<i>Typhoid Fever</i>		
Total cases	27	46

Case rate per 100,000 population .64 1.10

	Jan., 1926	Jan., 1925
<i>Whooping Cough</i>		

Total cases 1,683 529

Case rate per 100,000 population 39.9 12.7

Cities and towns noticeably exceeding their median endemic indexes*:

Attleboro	(4)	41	Brookline	(9)	21
Fall River	(17)	28	Cambridge	(14)	103
Avon	(0)	11	Framingham	(1)	27
Boston	(76)	432	Holliston	(0)	29

Brockton (7) 20 Natick (0) 31

*The median endemic index is obtained by arranging in arithmetical sequence the monthly totals of reported cases for the past five years and selecting the middle figure. The numbers in parentheses after the name of each city and town indicate the median endemic index for that city or town; the number without parentheses indicates the cases reported during the current month.

NEWS ITEMS

MILL HEAD GIVES HOSPITAL \$500,000—EARLE P. CHARLTON PROVIDES LABORATORY IN FALL RIVER—Earle P. Charlton, vice-president of the F. W. Woolworth Company and president of the Charlton Mills, has given \$500,000 to the Truesdale Hospital.

The plans, in addition to operating rooms and laboratories and such other rooms as will constitute a complete surgery, will include a new power plant, laundry, dining room for nurses and kitchen. Work will begin as soon as the weather permits.—*Boston Herald*, February 17.

THE *BOSTON HERALD* reports that the building of the College of Physicians and Surgeons on Shawmut Avenue is to be sold.

NOTICES

NOTICE OF EXAMINATION FOR ENTRANCE INTO THE REGULAR CORPS OF THE UNITED STATES PUBLIC HEALTH SERVICE

Examinations of candidates for entrance into the Regular Corps of the United States Public Health Service will be held at the following named places on the dates specified:

At Washington, D. C.	March 15, 1926
At Chicago, Ill.	March 15, 1926
At New Orleans, La.	March 15, 1926
At San Francisco, Calif.	March 15, 1926

Candidates must be not less than 32 years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily oral, written and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon-General, United States Public Health Service, Washington, D. C.

H. S. CUMMING, Surgeon-General.

UNITED STATES CIVIL SERVICE EXAMINATION

The United States Civil Service Commission announces the following open competitive examination:

Medical Intern (Psychiatric)

Applications for medical interne (psychiatric) will be rated as received until June 30. The examination

is to fill vacancies in St. Elizabeth's Hospital, Washington, D. C., at \$1860 a year, without allowances, and vacancies in positions requiring similar qualifications, at this or higher or lower salaries.

Applicants must show that they are graduates of a recognized medical college. Applications from senior students in satisfactory and regular attendance in a medical college of recognized standing will be accepted subject to their furnishing proof of graduation during the life of the eligible register. For the Psychiatric Service applicants must not have been graduated prior to the year 1921, unless they have been continuously engaged in hospital, laboratory or research work along the lines of neurology and psychiatry since graduation.

Competitors will be rated on general education, and technical training and experience.

The positions at St. Elizabeth's Hospital are tenable for one year. Appointees may be assigned to the Psychiatric Service or to the Medical and Surgical Service. For appointees assigned to the Psychiatric Service a postgraduate course in mental and neurological diagnostic methods is given during the year, a written examination is held, and promotions to the next grade (assistant medical officer) may be made of internes who pass the examination and have completed the probationary period of six months and the year of internship. Beyond this there is regular advancement for employees whose services are satisfactory. St. Elizabeth's Hospital has over 4000 patients, and the scientific opportunities in neurology and psychiatry are unsurpassed. For the appointees assigned to the Medical and Surgical Service, the internship consists of four months' surgery, four months' female medicine, four months' male medicine, and six weeks' pediatrics. Arrangements are also being made for six weeks in obstetrics. Upon successful completion of the internship in the Medical and Surgical Service appointees are given an accredited certificate recognized by the American Medical Association.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the Board of United States Civil Service Examiners at the postoffice or custom house, any city.

The United States Civil Service Commission announces the following open competitive examination:

**Physiotherapy Aide
Physiotherapy Pupil Aide
Physiotherapy Assistant**

Receipt of applications for physiotherapy aide and physiotherapy assistant will close March 13, April 17 and May 15. Receipt of applications for physiotherapy pupil aide will close March 13. The dates for assembling of competitors will be stated on the admission cards sent applicants after the close of receipt of applications.

The examinations are to fill a vacancy in St. Elizabeth's Hospital, Washington, D. C., and vacancies in the field services of the Veterans' Bureau and the Public Health Service.

The entrance salaries for physiotherapy aide range from \$1920 to \$1680 a year; for physiotherapy pupil aide, from \$720 to \$1500 a year; and for physiotherapy assistant, from \$1320 to \$1600 a year. Physiotherapy aides and physiotherapy pupil aides in the Public Health Service receive quarters, subsistence and laundry free of cost.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the Board of United States Civil Service Examiners at the postoffice or custom house, any city.

The United States Civil Service Commission announces the following open competitive examination:

Technical Assistant in Sanitary Engineering

Receipt of applications for technical assistant in sanitary engineering will close March 27. The date for the assembling of competitors will be stated on the admission cards sent applicants after the close of receipt of applications.

The examination is to fill a vacancy in the United States Public Health Service, Cincinnati, Ohio, at \$2100 a year, and vacancies in positions requiring similar qualifications, at this or higher or lower salaries.

The duties are to carry on public health engineering work pertaining to stream pollution, sanitary surveys, the treatment of water, sewage, and industrial wastes, drainage and antimalarial measures, sanitation of milk and shellfish, as well as elementary chemical and bacteriological laboratory work.

Competitors will be rated on theoretical and practical questions in sanitary engineering, and training and experience.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the Board of United States Civil Service Examiners at the postoffice or custom house, any city.

REPORTS AND NOTICES OF MEETINGS

ESSEX SOUTH DISTRICT MEDICAL SOCIETY

NEXT meeting of the Essex South District Medical Society will be held Wednesday, March 3, 1926, at the Lynn Hospital. Entrance to hospital on Washington St. 5 P. M. Clinic. 7 P. M. Dinner. Dr. Charles E. Mongan, Somerville, will speak on "Some Problems of Present Day Practice."

BERKSHIRE DISTRICT MEDICAL SOCIETY

Regular meeting.
Date—Friday, February 26th, 1926.
Place—The Park Club, Pittsfield, Mass.
Time—Dinner at 6:30 P. M.
Speaker—Charles H. Frazier, M.D., Professor of Surgery of Univ. of Penn.
Subject—"Pituitary Disorders and their Treatment."
Discussion—By every one present. Please come prepared to assist in this.

N. FINKELSTEIN, M.D., President.

MEETING OF THE HARVARD MEDICAL SOCIETY

THE Harvard Medical Society held its regular meeting on Tuesday evening, February 9, at the Peter Bent Brigham Hospital. The usual demonstration of cases preceded the paper of the evening.

The first case was a man aged 44, with characteristic symptoms and blood picture of per-

nicious anemia. Dr. Wm. P. Murphy discussed the treatment of this disease. The second case was a woman, aged 59, with a history of acute biliary colic. She had typhoid fever at the age of nineteen. The cholecystograms did not show any shadow of the gall bladder by the Graham-Cole Method of intravenous injection of sodium tetrabromo phenolphthalein. The impression of gall-bladder pathology given by the X-ray was confirmed at operation. A tense, thickened gall-bladder with many fine stones was removed. Another case with symptoms very suggestive of gall-bladder disease was cited. In this woman the cholecystogram showed a normal gall-bladder, yet the clinical evidence was so strong to the contrary that an operation was done. The gall bladder was found to be normal, confirming the diagnosis made by the Graham-Cole method. In discussing the usefulness of this test, Dr. Sosman stated that the X-ray diagnosis had been confirmed in 92.7 per cent of the cases operated on at this hospital.

Dr. Edward A. Boyden of the Anatomy Department of the Medical School was to have addressed the meeting on "Some Recent Observations on the Anatomy of the Gall Bladder," but he was unable to be present.

Dr. Whittaker of the hospital staff spoke on some recent studies made by himself and his colleagues on the physiology of the gall bladder.

Two methods were used in these studies. First the Graham-Cole method and (2) a new method by injection of iodide oil directly into the gall bladder of the cat.

It is an old concept that the gall-bladder empties in response to ingestion of food. Several hours after a meal, especially one rich in fat, the gall bladder is found collapsed. A carbohydrate meal is not effective in emptying the gall bladder at all. Dr. Boyden has observed in cats that the gall bladder becomes distended in the fasting condition.

With the new method of injection of iodide oil into the gall bladder of animals, the organ shows a very dense shadow in the X-ray and its activity can readily be followed with the fluoroscope.

After ingestion of a fatty meal, the gall bladder would sometimes start to empty in three to five minutes, at other times, not for half an hour. It may empty continuously or intermittently. There is no definite rule about this, but it is always found completely empty after seven hours. Changes in shape in the organ can be noted from minute to minute after feeding the animal a food rich in fat. There are ridges which suggest peristaltic waves. The end nearer the cystic duct appears to be more active than the fundus. Autopsy of these injected animals usually shows a little oil in the cystic duct, indicating that the duct is not so active as the bladder itself. It was found that

the bladder emptied as readily against gravity as with it. The position of the animal made no difference in the process.

Various extrinsic mechanical factors have been suggested as the emptying force of the gall bladder. One theory attempts to explain the phenomenon by the increase in intra abdominal pressure during inspiration. This would be contrary to the principle that pressure exerted at any point in a medium is transmitted equally in all directions. The increased pressure on the gall bladder is neutralized by the equally increased pressure on the ducts and the intestine. The fact that the ducts are collapsible disposes of the "siphon" theory. For the same reason a suction action by the duodenum would be ineffective.

Peristalsis of the intestinal tract does not influence the emptying of the gall bladder. Various non-fatty foods are passed along the gut rapidly, but there is usually little or no emptying of bile from the gall bladder. Egg-yolk has a markedly stimulating effect on the organ but when it was fed in a mixture with barium there was no change in the gall bladder. The barium apparently inhibited the effect of the egg.

Injection of smooth muscle stimuli such as Barium Chloride, Cholin and pituitrin caused marked contraction of the gall bladder. This indicates that its activity in emptying is due to smooth muscle. This smooth muscle action is apparently not due to reflex stimulation from the duodenum. In cases of gastro enterostomy in which no food passed through the duodenum, the gall bladder emptied in a normal manner.

With all connections of nerves with the gall bladder severed it emptied as well as ever. Stimulation of the vagi nerves had no effect on emptying. There was some emptying on stimulation of the left vagus but the same amount could be produced by sensory stimulation and was probably due to a change in the animal's position. Struggling of the animal had the same effect. Administration of epinephrin had no effect on the emptying process. It is apparently independent of nervous control of any kind.

Any physiological stimulus which activates the pancreas and liver should activate the gall bladder. According to Bayliss and Starling secretin should have this effect, yet its experimental administration produced no perceptible change. Neither did hydrochloric acid, given by duodenal tube. The gall bladder emptied normally with the pancreas disconnected from the duodenum, showing that pancreatic secretions do not play any significant role in activating the gall bladder. Bile salts which are supposed to be the only true cholagogues do not cause the gall bladder to empty its contents. Actual digestion of fats or proteins apparently

has to take place to empty the organ. There is probably some unknown factor involved. The sphincter papillae exerts some influence on the process of emptying. A glass cannula placed in the papilla of Vater prevented the gall bladder from filling. This allowed free outflow of bile and the normal tonus of the smooth muscle in its walls kept the gall bladder empty.

With the sphincter cut, however, the gall bladder filled and emptied normally. There is only a slight obstructive action needed to allow the bladder to fill and this is probably afforded by the normal tonus of the intestinal wall when the sphincter is inactivated. The sphincter may act to counterbalance the elasticity of the distended bladder.

There is some emptying of the gall bladder after injection of magnesium sulphate by duodenal tube. This cannot be due to a nervous mechanism as this drug has a general inhibitory effect rather than one of stimulation. Dr. Whittaker considers the use of this drug for biliary drainage, an illogical method. Besides it is dangerous on account of its paralyzing effect on the nervous system, if absorbed.

In summary:

The gall bladder empties after ingestion of fat and protein, especially fat.

Extrinsic nerves play no part in its activity.

The emptying is due to its smooth musculature which is activated by some unknown agency.

This activation is related to the digestion and absorption of fats.

The importance of the sphincter of Vater has been over-emphasized.

The normal tonus of the intestinal wall furnishes the resistance which allows the bladder to fill and this is overcome during digestion.

REPORT OF DINNER OF BOSTON HEALTH LEAGUE, FEB. 17, 1926

ON February 17, 1926, the Boston Health League held its annual dinner and meeting at the Hotel Victoria. Professor C. E. A. Winslow of the Yale School of Medicine was the principal speaker at this gathering of Boston's most prominent workers in the field of the community health.

After introductory remarks by Dr. Francis X. McNamee, retiring president and Dr. John W. Bertol, president-elect, Dr. George C. Shattuck, as chairman of the executive committee, rapidly sketched the scope of the League and its problems. Dr. James S. Stone admitted that the medical profession was rather slow in recognizing the importance of public health work, but this was due possibly to absorption in medicine itself, which has made such enormous strides in the last fifty years. After a few words by Dr. Richard M. Smith on the coöper-

ation of medical schools with public health activities, Professor Winslow—former pupil of Dr. Sedgwick, sanitary engineer, professor of public health at Yale, president of the American Public Health Association—spoke on the relation of the individual to public health. Rapidly tracing the development of public health from its early emergency work in checking epidemics to its later preventive work in reporting communicable disease, he showed that in the last analysis the community health depended largely on the personal hygiene of the individual.

A modern public health program with Boston as its model was then sketched. Our Boston leads all large cities (even Chicago) in the value and extent of its public health activities. Its Food Clinic at the Boston Dispensary; its Health Centers—models of their kind; its nursing work are all to be admired. Still, there is room for improvement, and here Dr. Winslow gave pertinent suggestions: more efficient treatment of tuberculosis by intensive campaigns to discover the incipient case; generalized nursing; instead of four different kinds of nurses, one general nurse for each two thousand individuals (this could well be tried out in East Boston); an intensive campaign for prenatal work; greater spread of the doctrine of mental hygiene.

What relation has all this to the practitioner of medicine? The "preventive treatment" of disease; new methods of paying physicians (here Dr. Winslow was not quite clear, though he appeared to favor so-called state medicine); gradual extension of clinic work—all these tendencies, though involving dangers, are irresistible. Still, the initiative and stimulus of the medical profession should not be hampered, and a proposed clinic should not be organized unless really necessary.

Public health men, said Dr. Winslow, united in a group, provide the community with service that it needs. Their real object is in the saving of human lives, not as striking or as spectacular as a rescue at sea, but none the less an actual saving.

The dinner was well attended by about one hundred active workers in medicine, public health, and biology.

THE CUTTER LECTURE ON PREVENTIVE MEDICINE

THE Cutter Lecture on Preventive Medicine was given at Harvard Medical School on February 11th by George E. Vincent, President of the Rockefeller Foundation. Dr. Vincent's subject was "Every Doctor a Health Officer".

He pointed out that much had been accomplished in the way of prevention already, especially in the reduction of communicable diseases and infant mortality. He said that there was no need to make an apology for public

health work. If this work is to grow and attain its possibilities the public must be educated to demand prevention, and the medical schools must coöperate in placing the emphasis of training more and more upon prevention.

Although public health work must be under the leadership of men primarily trained for this work, yet the interest and progress of preventive medicine will depend largely on the medical practitioner. His attitude at present is determined mainly by the standards of the community and of medical institutions. Medical students take as their ideals brilliant clinicians, surgeons, and laboratory men rather than leaders of public health. This is because the curing of disease is always more spectacular and dramatic than its prevention.

The attitude of the medical student to preventive medicine will also depend on the personality of the head of this department, and upon the emphasis laid upon this aspect of medicine by professors in other departments. The medical curriculum must be permeated by the preventive idea. Professors must be educated to teach preventive medicine in their own fields. If this can be brought about gradually it will be a great triumph.

THE NORFOLK DISTRICT MEDICAL SOCIETY

A REGULAR meeting of the society was held in Roxbury Masonic Temple, February 23, 1926, at 8:15.

Communication: Cardio-vascular-renal Disease and Its Management. Dr. James P. O'Hare.

Discussion of the paper was opened by Dr. W. R. Ohler.

Drs. William B. Breed and Harold M. Frost also discussed the paper and in addition presented the results of special investigation of related subjects.

BOSTON MEDICAL HISTORY CLUB

A REGULAR meeting of the Boston Medical History Club was held at the Boston Medical Library, January 18, 1926.

The first paper was by Dr. Malcolm Storer on "Medical New England in 1650." This period of American medicine is of great interest and has been studied by Dr. O. W. Holmes (1867) and Dr. Samuel Green (1881). Dr. Storer said that there was much illness in New England in the 17th century, among both the early settlers and the Indians. Severe epidemics swept the Indian tribes, the character of which is not clearly shown by the records. These epidemics may have been of smallpox or plague, but influenza was more likely. In one epidemic, or perhaps a series of short epidemics, nearly nine-tenths of the Indians died. The Pilgrims suffered severely, also, although not from the same

causes. Scurvy was prevalent among them, nearly fifty per cent. dying in the Plymouth colony of this disease. At one time, only six or seven were well, all the others being prostrate by this or other disease. The first building erected in Plymouth was a hospital, opened January 4, 1621. Dr. Samuel Fuller, who came over on the Mayflower, was very active in caring for the early colonists, not only at Plymouth but elsewhere. He travelled extensively and was well known to the colonists under Winthrop. The scurvy was largely due to the lack of fresh vegetables. The arrival of a ship-load of lemons later aided greatly in combating this disease.

Some of the later colonists were barber-surgeons, although many of the clergy were skilled in physic. Among the latter were Elisha Wiglesworth, Harvard 1651, John Eliot, the apostle to the Indians, and some of the early presidents of Harvard College. Quackery and exorbitant charges were soon in evidence, but were partly suppressed by law. Every housewife had a book of remedies at home. Few doctors attended obstetrical cases, as midwives were largely used. Samuel Fuller was about forty when he landed at Plymouth. He practiced for thirteen years, until his death in 1633. His main therapeutic remedy was blood-letting.

The daybook of Dr. John Winthrop, Jr., Governor of Connecticut, has been preserved. The book covers the period 1657-1667, prior to his being made Governor. Dr. Winthrop graduated from Trinity College, Dublin, and came to this country about 1650. He was versed in law as well as medicine. He returned to England often and helped found the Royal Society of England and contributed some early papers to it. As his daybooks are written in a very abbreviated form, they are difficult to decipher. Dr. O. W. Holmes spent much time in going over them. The main facts to be made out are as follows: Tartar emetic was the drug most often used by Dr. Winthrop, for a large variety of conditions. It was used in heroic doses until a number of purges or vomits took place. Calomel and nitre were also used, but not so frequently. Winthrop used few of the extraordinary drugs much in vogue, such as hearts, rattlesnakes, toads, cock's eyes, etc. Most of these were made up in infusions with an alcohol base, and probably their effect was largely due to the alcohol. The range of diagnosis was very small. Most of the cases were gastro-intestinal in character, many of them being cases of worms, a few apparently malaria, but many were classified by the symptoms only. Only a few patients had the benefit of a physical examination. Very few obstetrical cases are recorded. Many skin complaints are noted, for which Dr. Winthrop invariably used tartar emetic. There are a few cases of gonorrhœa and a few of rheumatism. No severe epidemic was recorded in Dr. Winthrop's note-

books. He apparently saw very few surgical cases. His method, in general, was always to clear out the intestinal tract by purges.

Dr. C. C. Stewart, Professor of Physiology, Dartmouth Medical School, spoke on "Some Unpublished Papers of Dr. Nathan Smith." Though Nathan Smith's ancestry is a matter of record, little is known of the earlier years of his life except that he was born at Rehoboth, Mass., in 1762; that he had served in the Vermont militia with the final rank of Captain, and that at the age of 21 he was teaching the district school at his home in Chester, Vermont. At that time, having witnessed and assisted in an operation performed by Dr. Goodhue of Putney, he expressed his wish to study medicine, but was advised to devote a year to further preparation, which he did. The years from 1784 to 1787 he spent under Dr. Goodhue's guidance, beginning the practice of medicine in Cornish, N. H., in 1787. In 1790, after studying under John Warren, Aaron Dexter and Benjamin Waterhouse, he received the degree of M. B. from Harvard Medical School,—one of the earliest medical degrees granted by the University.

Returning to Cornish in 1790, he doubtless found that he was unable to provide for the many applicants who wished to study under such a successful preceptor for in 1796 he made application to the Trustees of Dartmouth College, looking toward the founding of a professorship in medicine. Receiving some encouragement, he spent nine months in Glasgow, Edinburgh and London in further study, and returned to inaugurate the first course of lectures in 1797, though the formal vote of appointment dates from 1798, when the first class of two men received degrees.

He continued to fill this position at Dartmouth, with the assistance, from time to time, of Dr. Lyman Spalding, Col. Rufus Graves and Dr. Cyrus Perkins, until 1816, though in 1813 he became a member of the first Faculty of Yale Medical School, a position occupied until his death in 1829. He was largely concerned in the founding of Bowdoin Medical College in 1820, and to a lesser degree, of Vermont in the same year.

The most important published sources of information are: "The Life and Letters of Nathan Smith," by Mrs. Emily Smith, 1914, containing his letters to Dr. Shattuck; Dr. O. P. Hubbard's historical address, to be found in the Transactions of the N. H. Medical Society, for 1879; "Medical and Surgical Memoirs," 1831, edited by Dr. Nathan R. Smith, and containing a short biography; and extracts from a long correspondence with Dr. Lyman Spalding, (*Amer. Acad. of Med.*, 1906). Dr. Smith's publications are the famous "Practical Essay on Typhus Fever," N. Y., 1824; various papers included in the Memoirs already referred to, published after his death, and certain parts of Wil-

son's "Treatise on the Febrile Diseases," which he edited with notes.

Dr. Nathan Smith's business affairs were in the hands of Mills Oleott, lawyer, and later Treasurer of Dartmouth College, and finally were apparently entrusted to Jedediah Baldwin, some time postmaster in Hanover. There is every evidence that little currency was in use, "notes of hand" being given for even small sums, and elaborate book-keeping methods being necessary. It thus came about that when Dr. Smith removed from Hanover in 1817 his financial settlements were far from complete. To this we owe the fact that a small trunk containing chiefly business papers remained in Hanover and became a part of the collection of Prof. Frederic Chase, author of the history of the earlier years of the College, but was "lost" from Prof. Chase's death, in 1890, until it was presented to Dartmouth Medical School, in 1916, by his heirs.

This collection of papers has been examined by Dr. Stewart, who showed to the members of the Club: 1. A paper bearing the signature of Dr. Goodhue; 2. The letter from the Trustees in relation to Dr. Smith's proposal, on the basis of which he went forward with his preparations to found Dartmouth Medical School; 3. His passport, containing a physical description of Dr. Smith at the age of 34; 4. His commission in the N. H. Militia; 5. A receipt for one thousand dollars paid by Dr. Smith to the famous anatomist, Alexander Ramsay, for a course delivered in 1808; 6. A plan of the medical building; 7. Bills for its foundations and walls, in part paid by Dr. Smith; 8. The N. H. Act appropriating \$3450 to erect the building; 9. Many personal bills; 10. A few personal letters; 11. One of some twenty ledgers and day-books in which are entries of visits, medicines used, operations performed, and fees charged, and indications of the wide territory covered. These volumes are undoubtedly the most valuable part of the collection. From the day-books it is learned, for example, that Nathan Smith inoculated with small-pox virus in 1792, though the first record of inoculation with kine-pox is for Nov. 20th, 1800, not anticipating, as has been suggested, that by Dr. Waterhouse on July 8, 1800. There are several records of "perforating the bone" in cases of bone abscess, the earliest being Oct. 10, 1797, thus substantiating the claim that he anticipated the work of James Brodie, who was born in 1787.

It is expected that a more complete examination of the day-books, which cover all but four of the years from 1790 to 1815, will yield much that is of historical interest and value.

Mr. Ballard showed a signed letter of recommendation given to Dr. Lyman Spalding by Dr. Nathan Smith and President Wheelock of Dartmouth College, dated 1809, and a number of books by or about Nathan Smith, including his

"Life and Letters" by Emily A. Smith, New Haven, 1914.

Dr. J. W. Courtney showed two autographs which he was presenting to the Boston Medical Library, the first that of Scarpa, anatomist, ophthalmologist, expert draftsman and engraver. His signature was appended to a short accounting dated Parvia, 1790. The second autograph was that of Philip Record, 1799-1899. He was born in Baltimore and wrote an important book on venereal disease in 1838. He was the first to overthrow the doctrine of John Hunter that gonorrhoea and syphilis were the same disease. He also described the three stages of syphilis. His witty remarks are often referred to as "Recordiana." The autograph which Dr. Courtney showed was a leaf from an autograph album.

SOCIETY MEETINGS

DISTRICT MEDICAL SOCIETIES

Essex South District Medical Society

Wednesday, March 3—Lyman Hospital, Clinic, 5 P. M. Dinner, 7 P. M. Dr. Charles E. Mongan, Somerville. "Some Problems in Present Day Dentistry."

Thursday, May 6—Censors meet at Salem Hospital, 3:30 P. M. Tuesday, May 11—The Tavern, Gloucester. Annual meeting Speaker to be announced.

Essex North District Medical Society

May 5, 1916.—The annual meeting at the Anna Jaques Hospital, Newburyport.

Middlesex East District Society

April 14—At the Harvard Club at 6:30 P. M. Address by Dr. William E. Ladd: subject, "Kidney Affections in Childhood."

May—Annual meeting, Colonial Inn, North Reading. Subject and speaker to be announced.

Suffolk District Medical Society

March 31—At 8:15 P. M. Medical Section. "Some Experiments in Growth and its Examination." Dr. Roger L. Lee.

April 28—At 8:15 P. M. Annual meeting. Election of officers. "Some Diagnostic, Prognostic and Therapeutic Aspects of Disorders of the Blood." Drs. George R. Minot, Cyrus C. Sturgis and Raphael Isaacs.

Notices of meetings must reach the JOURNAL office on the Friday preceding the date of issue in which they are to appear.

BOOK REVIEWS

Teeth and Jaws. By HERMAN A. OSGOOD, M.D., Boston, Mass. First Edition, 99 pages, 72 plates, 54 text illustrations. Paul Hoeber, Inc. New York. 1925, 4to, Cloth \$10.00.

This book is the fifth volume of the Annals of Roentgenology, a series of monographic atlases edited by James T. Case, M.D.

The first chapter deals with "General and Technical Considerations." The author points out the importance of producing Roentgen pictures which show all the details of the teeth and surrounding bone which are necessary for correct diagnosis. "Normal X-ray Anatomy" is taken up in the second chapter, giving a description of the shape and form of the teeth and construction of their supporting tissue. There are a few discrepancies in this chapter: It is stated that the root of the tooth is "composed of cementum," whereas it is only covered by a thin layer. The term "interdental papilla" is incorrectly used to designate the crest of the alveolar process and also the anterior nasal spine

is called "bony frenum." The third chapter deals with "The Angle of Incidence and the Principle Ray" and is a valuable exposition of the technique of making exposures for dental films.

The next chapters are given over to a description of the X-ray findings of various pathological conditions. In chapter IV the "Pathology of the Crown and the Pulp Chamber" is taken up. The writer demonstrates an important feature in preventive dentistry, by the use of Roentgen diagnosis for the finding of cavities in obscure places, conditions which often lead to pulp infection. The diagnostic signs of pulp disease described in this chapter are of great importance and very often overlooked. The statement made here "that the tooth and its socket is a true joint" however has no histological foundation.

A description of the most frequent dental lesions is contained in chapter V entitled "The Pathology of the Apical Area" in which the importance of the Roentgen method for the diagnosis of granuloma as a possible septic focus is well emphasized. The author frequently refers to the dental granuloma as a tumor, he writes "the simple granuloma is a solid connective tissue tumor." This is not exactly correct, for while the word granuloma implies that it is a swelling, it is decidedly a new formation entirely of an infectious nature, a proliferation of granulation tissue infiltrated by large numbers of lymphocytes and leukocytes, which are the predominating factors. In regard to the picture of the bone cavity which contains the granuloma or chronic abscess, nothing has been said about its anatomical location. The question whether or not a perforation exists of the outer or inner cortical layer of the bone is of greater importance when considering the resulting picture than the matter it contains. There is very little difference between the radiability of granulation tissue and pus.

"The Pathology of the Perielementum and the Alveolar Margin" is described in chapter VI and "Rootcanal Treatment" in chapter VII.

Chapter VIII deals with "Roentgen-Ray Indications in Oral Surgery and Bone Repair" showing the use of the Roentgen Picture in following the healing after various operative dental procedures. The "Missing, Unerupted and Supernumerary Teeth" are taken up in chapter IX.

The use of "Extraoral Films" is of decided advantage under certain conditions and essential points in the technique are given in the tenth chapter of this book. Chapter XI describes "Cysts and Tumors" and the changes they produce in the bones. The last chapter treats with "The Maxillary Sinuses" which the author points out, are so frequently infected as the direct result of lesions on the apices of the superior bicuspids and molars. The statement

that sputum and mucus exudates can be distinguished from pus on account of a difference in density is not accepted by the most expert roentgenologists.

Appended is an extensive bibliography of textbooks and recent articles on dental roentgenology. This is followed by large collection of Roentgen pictures, classified according to the various types of lesions. Many of the small dental films are enlarged to show greater detail of structure. They are contained on seventy-two plates, with descriptive legend for each illustration.

The value of this book has been pointed out in preface by the editor, when he states that the purpose of these atlases is to bring to the roentgenologist at home a postgraduate course and to leave with him a series of master roentgenograms which he may study and make comparisons as often as desired.

Surgery. By DR. M. KIRSCHNER, KÖNIGSBERG, and DR. O. NORDMANN, Berlin. Berlin and Vienna; Urban and Schwarzenberg, 1925.

This new and comprehensive system of general and special surgery by many prominent contributors, edited by Kirschner and Nordmann, is announced to appear in six volumes. The first two instalments now at hand constitute that part of Volume I which deals with the history of surgery, surgical anesthesia and asepsis. Roentgen ray and radium, and glycosuria; and that part of Volume III which deals with the surgery of the lymph-nodes, breast, and endocrine glands. The work is ambitiously elaborate and monumental, and is abundantly illustrated. Particular interest attaches to the chapters on the endocrine glands, which are contributed by Sudeck and Oehlecker of Hamburg. The editors promise that no pains will be spared to bring this work completely to date.

Clinical Researches in Acute Abdominal Disease. By ZACHARY COPE, B.A., M.D., M.S., F.R.C.S. Published by Humphrey Milford, Oxford University Press.

This little book should be in the hands of every man engaged in the general practice of medicine or surgery. The author's purpose is "to make the complicated and anxious work of clinical diagnosis easier for the practitioner." In recent years laboratory diagnosis has been emphasized at the expense of clinical diagnosis. The two are equally important and should go hand in hand. "Fortunate is that man," begins the book, "whether bacteriologist, physician or surgeon, who can preserve an equal balance between the claims of the bedside and the laboratory." The book is a study, or rather, a review of studies in clinical diagnosis. It discusses a number of "small points," frequently overlooked, upon which the diagnosis often turns in acute abdominal disease. The author

emphasizes the great importance of the parietal peritoneum in the localization of abdominal pain. He also devotes a chapter to muscular rigidity and a long one to cutaneous hyperesthesia citing numerous cases where the location and distribution of this was of great assistance in differential diagnosis. The chapter on phrenic shoulder pain is a monograph in itself. Other "small points" treated are genito-urinary symptoms in acute appendicitis, the femoral test for hypogastric peritonitis and the occurrence of perinephric abscess without disease of the kidney. The book is made even more valuable by many admirable illustrations.

Artificial Sunlight and Its Therapeutic Uses.
By FRANCIS HOWARD HUMPHRIS.

The author gives a very detailed and interesting account of the history of Artificial Sunlight treatment.

The description of the apparatus although a very complicated subject is made very clear.

In the author's chapter on therapeutics, he mentions that the more body surface exposed to the rays in question the greater is the therapeutic effect. This cannot be too strongly emphasized as we still have adherents to the old school which lays a great deal of stress upon localized treatments and forgets altogether the importance of generalized exposures. The author in this chapter, with few exceptions, states dosages in terms of "Erythema" and "Tonies." This is quite an improvement over books and articles previously written on this subject, where specific dosages in terms of distance and time are mentioned. This cannot be done as no two individuals are alike as far as reaction to the artificial sunlight is concerned, and that no two lamps are alike.

The discussion of the various types of lamps and their uses is clear and interesting.

The author is rather too optimistic in his discussion of the use of artificial sun in skin diseases. His results in cases of Acne Rosacea and Dermatitis Venenata are rather surprisingly good. The author's good results in Herpes Zoster is interesting as it confirms some of the recent work done in this country. Dermatitis Herpetiformis and Parapsoriasis should be added to the author's list of skin diseases that respond well to the artificial sun. Investigations regarding the treatment of Parapsoriasis by this method are rather recent and were first begun at the Massachusetts General Hospital.

In discussing the treatments of the various skin affections, the author dwells mostly upon the local treatment and fails to bring out the importance of combined generalized and local treatments. He does, however, mention the importance of generalized exposures in Lupus Vulgaris.

The book as a whole is interesting and instructive.

Feeding and the Nutritional Disorders in Infancy and Childhood. By JULIUS H. HESS, M.D. Fourth revised and enlarged edition, Philadelphia, F. A. Davis Company, 1925.

The fourth edition of Hess's well known text book brings it up to date in the rapidly changing department of medicine with which it deals. As stated in the preface, a basis for the preparation of diets in artificial feeding has been developed, and diets for older children have been added. The more recent developments in feeding, relating especially to the various acid milk preparations, are discussed, and the chapters on rickets, scurvy, spasmodophilia, acidosis, and the anemias have been enlarged and revised. The work is scholarly and thorough and should be of great value to both practitioner and student.

An Introduction to Objective Psychopathology. By G. V. HAMILTON, M. D. C. V. Mosby Co., St. Louis, 1925. pp. 354.

The chief merits of this volume are the dynamic approach to certain psychopathological problems, although these are mixed by the author with sort of an attenuated and diluted psychoanalysis, and the insistence that psychopathology forms an integral part of internal medicine. He emphasizes, and justly so, that the family physician should possess some knowledge of psychoanalysis, in order to effectively deal, in a limited way, with the neurotic complaints of his patients and not rely on so-called tonics and sedatives for therapeutic purposes.

Unfortunately he is inclined to report the clinical material on which his conclusions are based, from the standpoint of the "conditioned reactions" of the behavioristic school rather than from the unconscious psychical determinants of the psychoanalytic approach. Consequently most of the case records correspond to the "emotional shock" theory of the French school of psychopathology, and are more on the descriptive than the interpretative level. If the psychopathology never went any deeper than this, its services for the relief of nervous symptoms in human beings would be decidedly limited.

In the discussion of psychoanalysis, the whole important question of resistance and transference, on which the successful technique of analytic therapy so largely depends, does not receive the detailed treatment which it deserves. In addition, the description of the psychoanalytic theory of sex, while in the main correct, does not clearly describe the libido development from the pregenital manifestations to object love. However, the comparisons of the sexual behavior of human beings with that of the anthropoids is interesting, particularly so in view of similar observations made by Koehler. In the cases of what is termed the "conditioned fear reactions," that is, the typical cases of anxiety hysteria and

psychosexual impotence, nothing is said of the analytic situation of the early fixations or the compulsive repetitions which play so important a part in these disorders.

While the attitude towards psychoanalysis is a critical one, yet the author feels that the ability to cure a case of "nervousness" is often contained in the possibility of enabling the patient to develop habits of rational responsiveness to situations which have previously been more primitive pathogenic reactions. Surely this is nothing but another way of stating the dynamic and analytic approach to the neuroses as psychogenic reaction-types, regressing to older and more primitive pathways.

Lectures On Nutrition. A series of lectures given at the Mayo Foundation and the Universities of Wisconsin, Minnesota, Nebraska, Iowa and Washington (St. Louis) 1924-25. 12mo. 243 pages illustrated. Philadelphia and London: W. B. Saunders Company, 1925. Cloth \$2.50 net.

The first lecture on the measurement and significance of basal metabolism was given by Dr. F. G. Benedict. Dr. Graham Lusk considered the problems of metabolism. The proportions in which protein, fat, and carbohydrate are metabolized in disease is described in an interesting way by Dr. E. F. DuBois. Muscular activity and carbohydrate metabolism is taken up by Dr. A. V. Hill. Dr. E. V. McCollum describes "Our present knowledge of the Vitamines," and Dr. H. McL. Evans discusses the relation between fertility and nutrition. These lectures by some of the most noted investigators of nutrition give an interesting, progressive, and valuable account of the subject.

Lectures On Heredity. A series of lectures given at the Mayo Foundation and the Universities of Wisconsin, Minnesota, Nebraska, Iowa, and Washington (St. Louis), 1923-24. 12 mo., 250 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1925. Cloth, \$2.50 net.

This series of lectures was presented to the public during the year 1923-1924, under the auspices of the Mayo Foundation. They cover the general topic of heredity and are intended for use by the general public. The book consists of six lectures by research workers in various institutions throughout the country. They cover the subject thoroughly. Perhaps the lecture of greatest interest to physicians is that on "Heredity in Relation to Cancer," by Dr. Maud Slye, Professor of Pathology, University of Chicago. The book is well written and the material is presented in an excellent manner by authorities in the various branches of the study of heredity. It can be highly recommended to anyone interested in this subject.